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JOURNAL OF THE BRITISH MEDICAL ASSOCIATION

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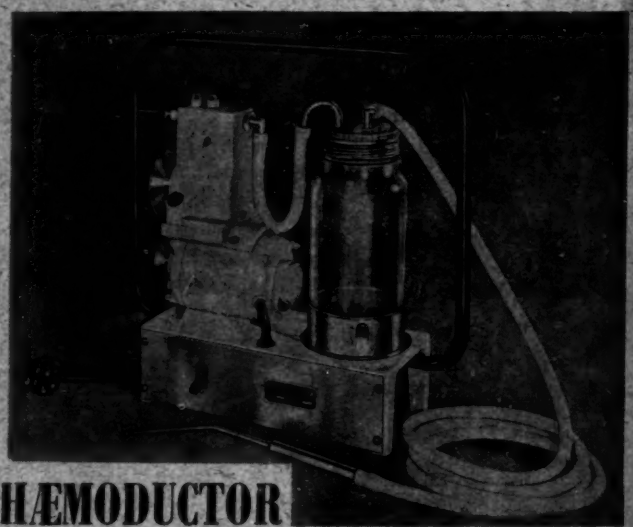

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BRITISH MEDICAL JOURNAL

LONDON SATURDAY APRIL 22 1950

VITAMIN B_{12} AND FOLIC ACID IN MEGALOBLASTIC ANAEMIAS OF PREGNANCY AND THE PUERPERIUM

BY

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Megaloblastic anaemia occurring in pregnancy and the puerperium is clearly distinct from Addisonian pernicious anaemia with its associated gastric atrophy and permanent loss of Castle's intrinsic factor. Trials with vitamin B_{12} reported here emphasize that even the nature of the limiting haematopoietic factor may be different in the two disorders.

Haematological methods and dietary control have been described (Ungley, 1949). Several cases are excluded because of spontaneous remission, and only six will be presented. Five were classical examples of the so-called "pernicious anaemia of pregnancy"; the sixth had unusual features. All showed megaloblastic erythropoiesis on marrow puncture.

Case 1

Mrs. A., aged 34, was first seen in the fourth month of her third pregnancy. She then had hypochromic anaemia with a normoblastic marrow, and received transfusions and iron. At the eighth month she returned with severe swelling of the legs and vulva, and a marked anaemia, this time associated with a megaloblastic marrow. Except that she ate red meat only twice a week and disliked cabbage the diet had been fairly good. There was free HCl in the gastric juice. Red blood cells numbered 1,530,000 per c.mm.; haemoglobin, 30% (4.4 g. per 100 ml.); colour index, 0.98; M.C.V., 80 μ^3; M.C.H.C., 34.2%; M.C.H., 27.1 $\mu\mu$g. Plasma bilirubin was 0.64 mg. per 100 ml. (direct reaction negative).

A concentrate of Lester Smith's red pigments (not yet crystalline) was given parenterally in a dose colorimetrically equivalent to 65 μg. of vitamin B_{12} (Fig. 1). There was no response, and after a few days the patient was transfused with blood of a group suitable for differential agglutination by the Ashby technique (Dr. W. Walker). Ten days after receiving vitamin B_{12} her own red blood cells had fallen to 1,130,000 per c.mm. The marrow was still megaloblastic, and oedema had increased. She was now given 2.5 mg. of folic acid daily, alternately by mouth and by injection. After four days the marrow was normoblastic. A reticulocytosis of 26.6% followed, and the red blood cells increased to 2,240,000 per c.mm. in 10 days. When a yeast extract was substituted for folic acid there was no secondary reticulocytosis, and erythropoiesis continued at the same rate. The rapid rate of elimination of transfused red cells changed to normal after folic acid.

After delivering a healthy child the patient continued to improve, red cell counts reaching normal levels without further treatment, except a course of iron.

Case 2

Mrs. B., aged 24, twice had megaloblastic anaemia associated with pregnancy. The anaemia which followed the birth of her first child responded to an alcoholic extract of yeast. Free HCl was present in the gastric juice. Throughout her second pregnancy she felt well, but by regular blood examination a recurrence of the anaemia was detected. At the eighth month the red blood cells numbered 3,470,000 per c.mm.; haemoglobin, 65% (9.6 g. per 100 ml.); colour index, 0.94; M.C.V., 96.0 μ^3; M.C.H.C., 29.2%; M.C.H., 27.7 $\mu\mu$g.; white blood cells, 8,900; the marrow was megaloblastic.

An injection of 80 μg. of vitamin B_{12} did not produce a reticulocyte response, the marrow remained megaloblastic, and in nine days the red blood cells fell to 3,190,000 per c.mm. (Fig. 2). When 20 mg. of folic acid was given daily by mouth reticulocytes rose to 4.6% on the seventh day and the red blood cells increased to 3,760,000 in 17 days. After 28 days —nine days before parturition—the counts were unchanged. There was a slight fall to 3,360,000 after delivery, followed by a rapid rise to normal levels.

Case 3

Mrs. C., aged 32, had a routine examination at the sixth month of pregnancy which revealed an unduly low blood count; red blood cells, 2,410,000 per c.mm.; haemoglobin, 53% (7.8 g. per 100 ml.); colour index, 1.1; M.C.V., 103.7 μ^3; M.C.H.C., 31.4%; M.C.H., 32.5 $\mu\mu$g.; white blood cells, 6,200 per c.mm. Apart from pallor there were no signs of disease. Her appetite and diet had been excellent and she had been free from gastro-intestinal disorder. The tongue was well papillated, and free HCl was present in the gastric juice. A Price-Jones curve showed a mean diameter of 7.72 μ, standard deviation 0.77 μ, coefficient of variation 9.9%, megalocytosis 12%, microcytosis *nil*. The marrow was megaloblastic. Plasma bilirubin was normal (0.24 mg. per 100 ml.) and methaemalbumin was not detected (175 mm. depth). In 24 hours the excretion of ketosteroids was 5.1 mg. (Dr. F. K. Herbert). Professor Marrian, of the department of biochemistry, University of Edinburgh, kindly examined two 24-hour specimens of urine, with the following results: pregnanediol, 30.3 and 28.5 mg.; total oestrogen (estimated as oestradiol), 11.8 and 12.5 mg.

After a control period, 80 μg. of vitamin B_{12} was injected intramuscularly (Fig. 3). There was no response and the marrow remained megaloblastic. A yeast extract also proved ineffective. Folic acid was then given daily, 2.5 mg. by intramuscular and oral routes alternately. Reticulocytes rose to a peak of 10.6% on the fifth day, and in 10 days the red blood cells increased from 1,760,000 to 2,200,000 per c.mm. When the dosage was increased to 15 mg. daily reticulocytes rose again slightly to 3.2% on the fifth day. After 10 days red blood cells numbered 2,860,000, but there was no further increase up to 20 days.

When later she received 120 ml. of an aqueous liver extract daily the red blood cells increased to 3,630,000 in 10 days, but there was no further increase in 16 days, and haemoglobin fell from 63% to 56% (8.3 g. per 100 ml.), with M.C.V. 83.6 μ^3,

M.C.H.C. 27.5%, M.C.H. 23.7 $\mu\mu$g. On this account she was given ferrous sulphate, 1.2 g. daily. At the same time folic acid was restarted in doses of 20 mg. Two weeks later—six days before the child was born—the red blood cells numbered 3,650,000 per c.mm., with haemoglobin 67% (9.9 g. per 100 ml.). After delivery, with no change in treatment, recovery was rapid, and in 12 days the red blood cells numbered 4,420,000, with haemoglobin 82% (12.1 g. per 100 ml.). A Price-Jones curve at seven weeks gave normal values: mean diameter, 7.25 μ; standard deviation, 0.63 μ; coefficient of variation, 8.7%; megalocytosis, *nil*; microcytosis, 0.8%.

Case 4

Mrs. D., aged 25, was admitted to hospital with fever and anaemia two days after the delivery of her third child, which was healthy although 10 weeks premature.

Two weeks before delivery she took to bed because of diarrhoea, vomiting, and loss of weight, but from the second month she had had increasing weakness, soreness and ulceration of the mouth and throat, with pain on swallowing. She was pale and thin. The tongue, though normally papillated, showed several small white ulcers. A urinary infection was quickly controlled with hexamine. Gastric analysis at first showed achlorhydria, but 10 days later free HCl was present. Red blood cells numbered 1,460,000 per c.mm.; haemoglobin, 31% (4.6 g. per 100 ml.); M.C.V., 102.8 μ^3; M.C.H.C., 30.6%; M.C.H., 31.1 $\mu\mu$g.; white blood cells, 15,100 per c.mm. The marrow was megaloblastic. Van den Bergh's test was negative and methaemalbumin was not detected (depth 160 mm.).

After transfusion and a control period the red blood cells numbered 2,220,000, and 80 μg. of vitamin B_{12} was injected intramuscularly. Reticulocytes rose to 3.6% on the sixth day, but after 15 days the red cell count and marrow picture remained unchanged. During subsequent treatment with yeast extract, folic acid, and marmite the red blood cells slowly increased to 4,370,000 per c.mm. There was a reticulocytosis of 4.4% on the fourth day of folic acid therapy (Fig. 4).

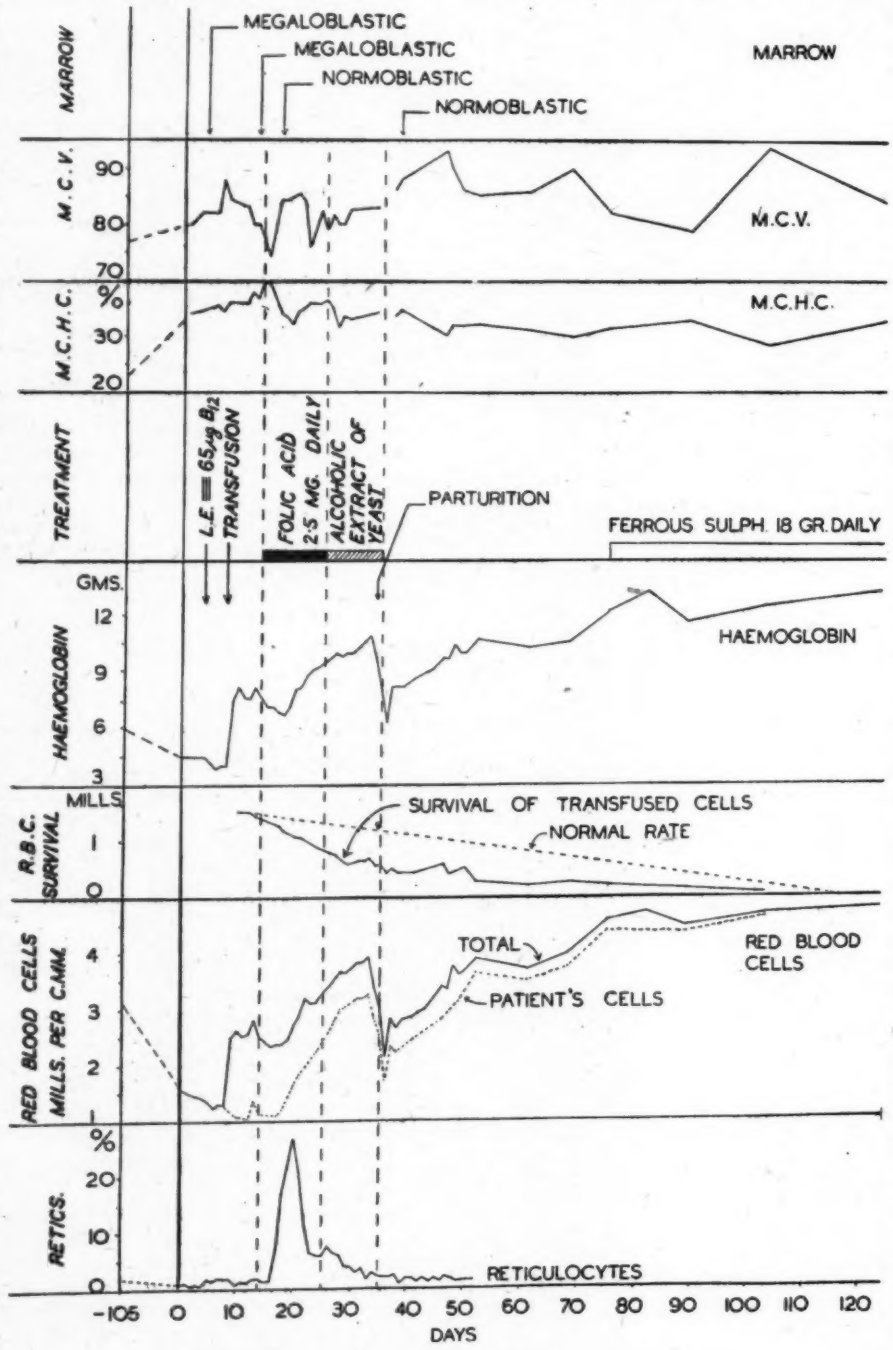

FIG. 1.—Case 1. Megaloblastic anaemia of pregnancy.

Case 5

Mrs. E., aged 40, gave a doubtful history of anaemia following the birth of her fifth child, but had otherwise been healthy. In the third month of her sixth pregnancy she lost her appetite, ceased eating meat, eggs, and fish, and subsisted mainly on bread, milk, potatoes, fruit juice, and meat extract. In the fifth month she became listless and breathless, with swelling of the legs and, later, diarrhoea and headaches.

When admitted at eight months she was obese, pale, dyspnoeic, and moderately oedematous. Blood pressure was 170/90 mm. Hg, blood urea 43 mg. per 100 ml. Marked albuminuria persisted until after parturition. The tongue was smooth. The red blood cells numbered 980,000 per c.mm.; haemoglobin, 20% (3 g. per 100 ml.); M.C.V., 102 μ^3; M.C.H.C., 29.6%; M.C.H., 30.2 $\mu\mu$g.; reticulocytes, 0.4%; white blood cells, 3,000 per c.mm. Blood films showed macrocytosis and the marrow was megaloblastic. Gastric analysis later showed free HCl. Plasma bilirubin was 0.48 mg. per 100 ml. Methaemalbumin was not detected.

The patient was transfused with cells from 560 ml. of blood, an equal volume of her own blood being removed simultaneously, using polythene catheters (Fig. 5). At the same time 80 μg. of vitamin B_{12} was given intramuscularly. After 38 hours her condition remained serious, and as a response to vitamin B_{12} was unlikely she was given 30 mg. of folic acid intravenously. She was transfused then and again two days later because of epistaxis. Reticulocytes rose on the third day after folic acid, reaching a peak of 18.8% on the seventh day, with clinical improvement. On the fifth day after folic acid she

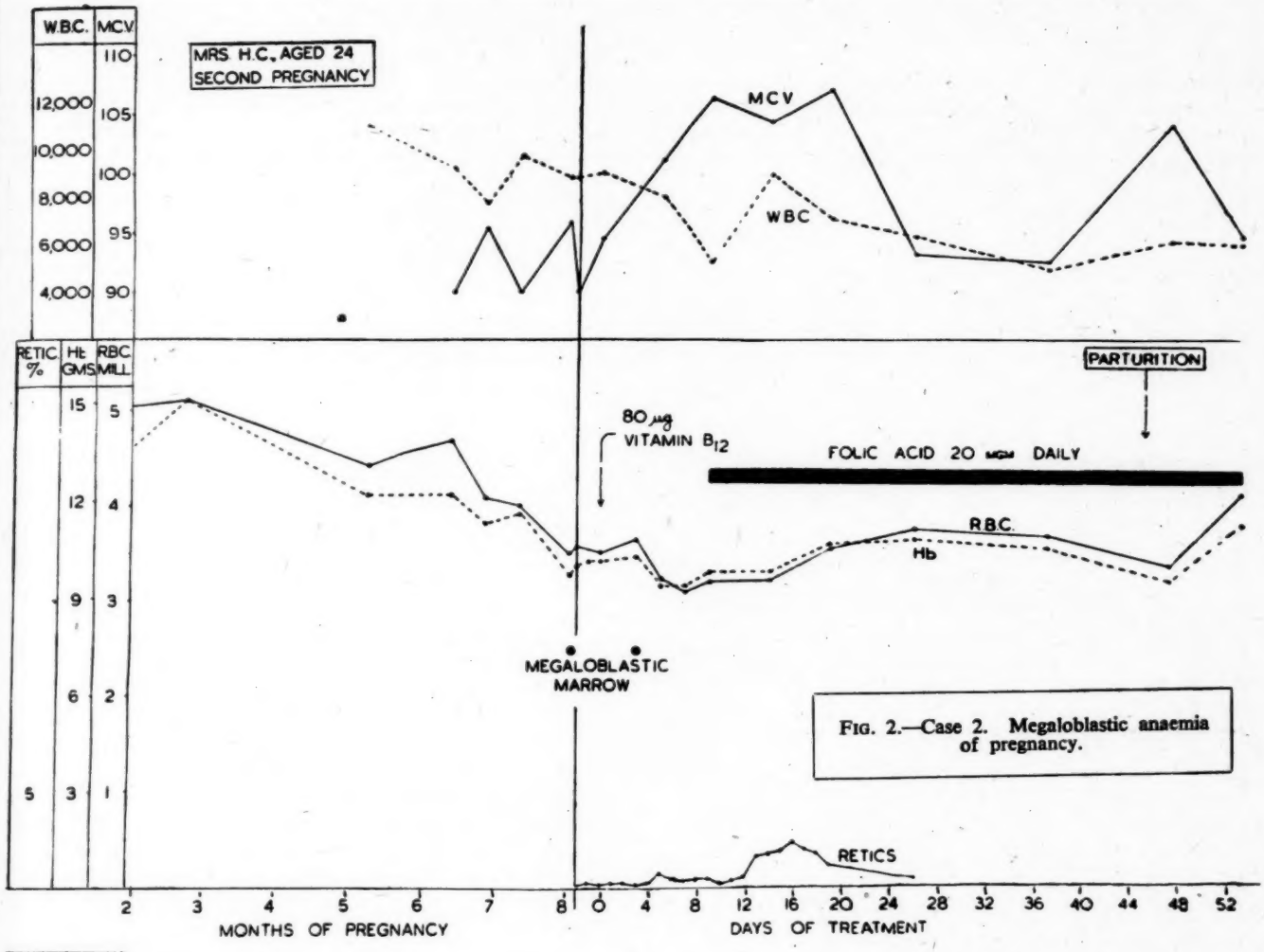

FIG. 2.—Case 2. Megaloblastic anaemia of pregnancy.

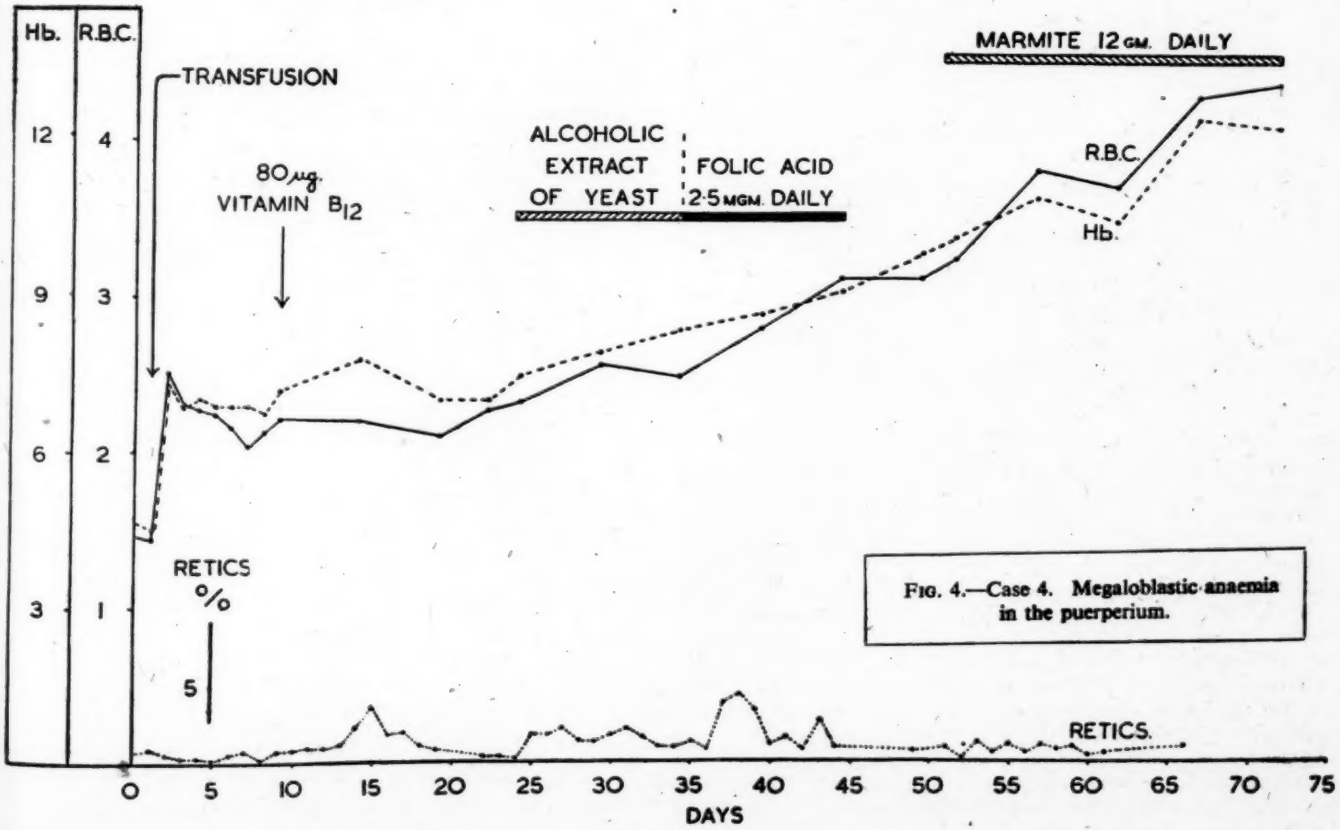

FIG. 4.—Case 4. Megaloblastic anaemia in the puerperium.

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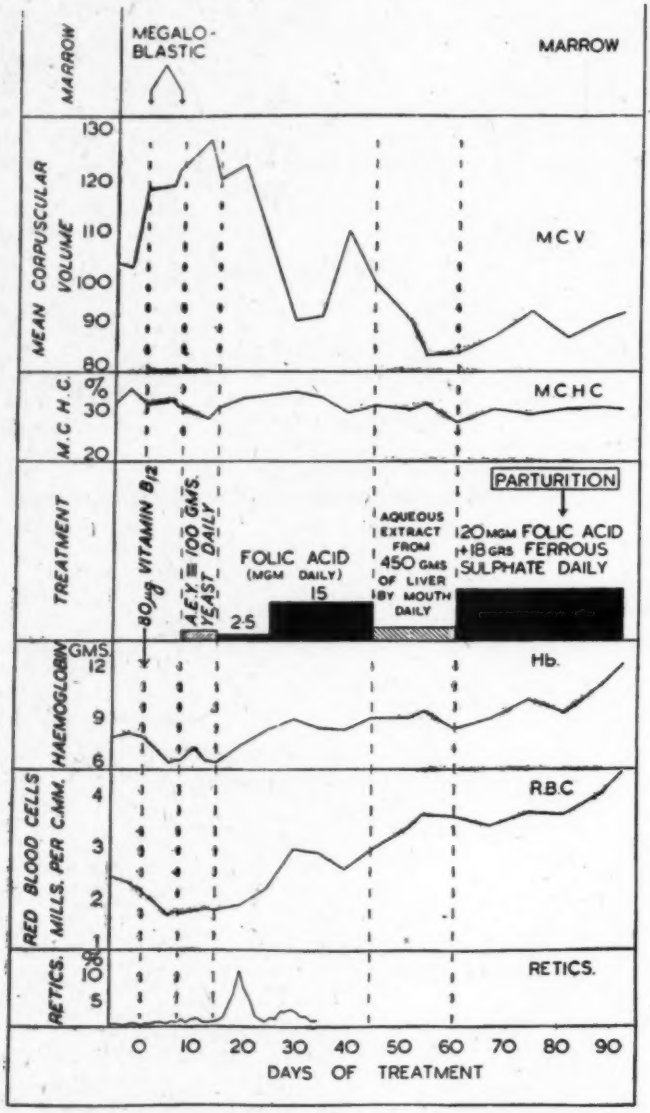

FIG. 3.—Case 3. Megaloblastic anaemia of pregnancy.

gave birth to a child, which died of cystic cerebral degeneration.

Her condition improved without further treatment until the 19th day, when the red blood cells numbered 2,650,000 per c.mm., with haemoglobin 52% (7.7 g. per 100 ml.). She was now given 20 mg. of folic acid daily by mouth, and after three weeks, two months, and four months the red blood cells numbered 4,310,000, 4,760,000, and 5,220.000 respectively. Treatment was stopped, and so far (two months) she has not relapsed.

Case 6

This patient, aged 26, was admitted four weeks after the birth of a full-term normal child. Iron was prescribed early in pregnancy for pallor, which in the terminal three months became more pronounced and was accompanied by swelling of the feet. The dietary history was satisfactory. Labour was normal, with no serious blood loss, but afterwards she became much worse, having dyspnoea and palpitation even in bed. Iron therapy brought no relief.

On admission she was extremely pale and slightly yellow. The tongue was smooth at the edges and clean, but never sore. The liver and spleen were just palpable. There was achlorhydria even after histamine and alcohol. Plasma bilirubin was 4.8 mg. per 100 ml. (direct reaction negative). Methaemalbumin was not detected. Thymol turbidity and thymol flocculation were normal. A fragility curve (after transfusion) showed a wide range from 100% haemolysis at 0.34 to *nil* at 0.56% saline, but the mean corpuscular fragility was just within normal limits. The red blood cells numbered 1,060,000 per c.mm.; haemoglobin, 24% (3.6 g. per 100 ml.); reticulocytes, 4.6%; colour index, 1.13; cell volume, 11%; M.C.V., 103.8 μ^3; M.C.H., 33.5 $\mu\mu$g.; M.C.H.C., 32.3%; white blood cells, 2,700. A Price-Jones curve showed mean corpuscular diameter 7.66 μ, standard deviation 0.98 μ, coefficient of variation 12.8%, megalocytosis 12.8%, microcytosis 1.0%. The marrow was predominantly megaloblastic.

The patient was transfused with erythrocytes, which could be separated by differential agglutination (Dr. W. Walker). Afterwards there was a spontaneous reticulocytosis of 38.6%, with a transient rise of red-blood cells (Fig. 6). Nevertheless the blood from this and two other transfusions was rapidly destroyed and the total red cell count fell to 820,000 per c.mm. The injection of 80 μg. of vitamin B_{12} had no effect on the blood picture or on the haemolysis, and the marrow remained megaloblastic.

The subsequent daily administration of 20 mg. of folic acid by mouth was followed by prolonged reticulocytosis, itself of doubtful significance because of the previous findings. After two weeks the rate of elimination of transfused red cells fell and subsequently became normal. The marrow was now normoblastic. The rise in the total red cell count flattened out at about 3,500.000, but normal levels were subsequently attained after prolonged treatment with refined liver extract ("examen" 10 ml. every two weeks for 10 weeks, supplemented latterly with iron). For the past three months the patient has remained well without treatment. The blood picture is normal and the liver and spleen are not palpable.

Comment

Case 1 received a concentrate of red pigments including vitamin B_{12} and Lester Smith's slow-moving red components colorimetrically equivalent to 65 μg. of vitamin B_{12} (Ungley, 1948). The other five were given 80 μg. of pure crystalline vitamin B_{12}, also prepared by Lester Smith from liver.

In Case 4 there was a slight reticulocytosis without increase of red blood cells. In Cases 5 and 6 the patients were so critically ill that folic acid had to be given within a few days of injecting vitamin B_{12}. The possibility of a delayed response to the latter cannot entirely be ruled

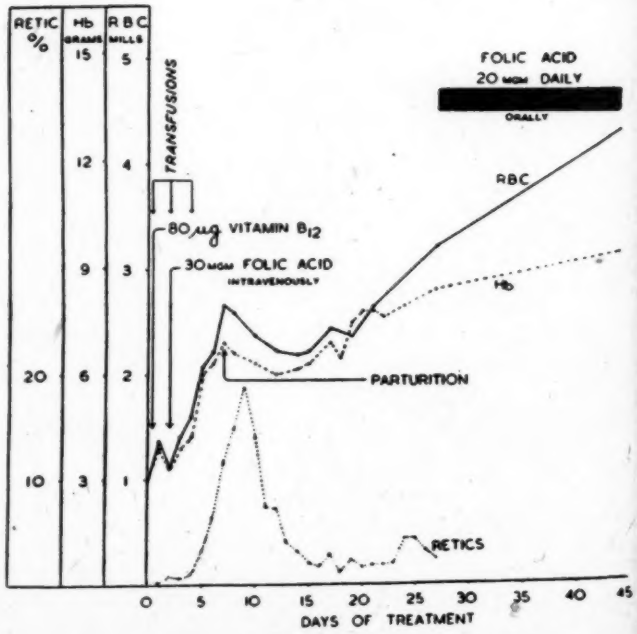

FIG. 5.—Case 5. Megaloblastic anaemia of pregnancy.

out, but is considered improbable. In Cases 1, 2, and 3 the results were clearly and completely negative. This indicates a lack of response to the injection of doses of vitamin B_{12} considerably in excess of those needed to produce a response in Addisonian pernicious anaemia. All six patients subsequently responded to folic acid, in three cases to as little as 2.5 mg. daily.

In addition to these cases treated with vitamin B_{12} another 21 patients (out of the series of 47 to be reported shortly) had parenteral liver therapy. Many showed a slight reticulocytosis, but in eight cases there was no increase of red blood cells, and in six the response was probably negative or poor. In the remaining seven patients apparent responses coincided with and may have

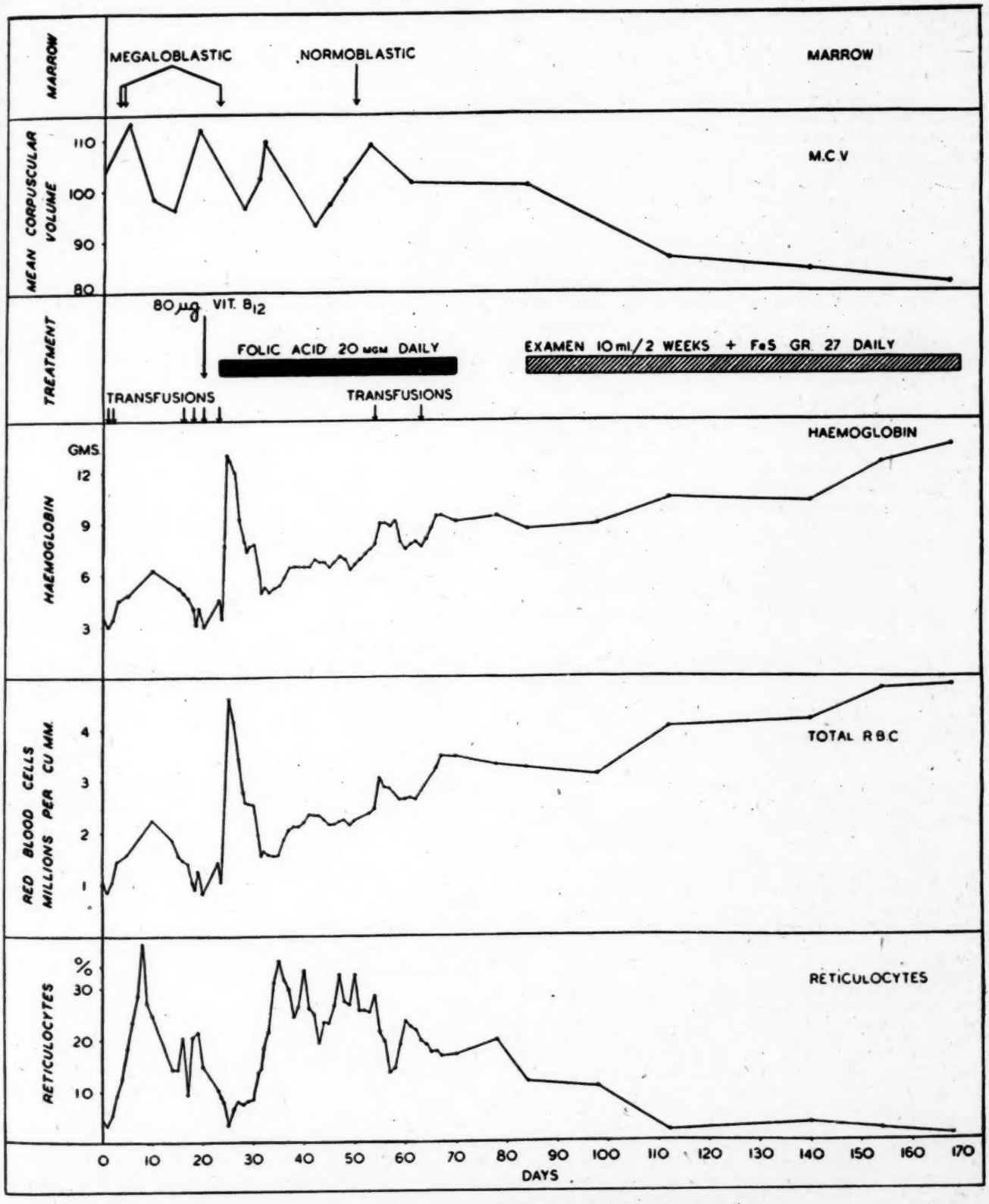

FIG. 6.—Case 6. An unusual case of megaloblastic anaemia in the puerperium.

been partly or entirely due to spontaneous remission. In no case was there a response to injections of crude liver extract after refined liver extract had failed. Yeast extracts were effective in some and failed in others. There were no failures with whole liver by mouth or with folic acid.

Bethell, Meyers, and Neligh (1948) and Day, Hall, and Pease (1949) each report failures to vitamin B_{12} followed by response to folic acid in a single case of megaloblastic anaemia associated with pregnancy or the puerperium. Many others have reported failures to respond to parenteral liver therapy.

Since vitamin B_{12} is clearly ineffective in these anaemias, theories based on deficiencies of Castle's intrinsic and extrinsic factors need revision. Some of our patients gave normal dietary histories, and there was nothing to suggest that the intake of foods containing folic acid was lower than in other pregnant women of similar social status who did not develop megaloblastic anaemia.

The only aetiological factor common to these anaemias was their relation to pregnancy or the puerperium. An abnormal pattern of excretion of hormones in the urine is reported by Day, Hall, and Pease (1949). In our Case 3 no abnormality could be detected in the excretion of ketosteroids, pregnanediol, or total oestrogens estimated as oestradiol. This does not rule out the possibility of some other abnormality in hormone production, and further investigations are contemplated.

In Case 1 the rapid elimination of transfused red cells fell to normal after folic acid. In Case 6 haemolysis was much more severe and reticulocyte counts were so high as to raise doubts about the diagnosis even though the marrow was megaloblastic. Vitamin B_{12} had no effect on the blood and marrow picture, and excessive haemolysis continued. Folic acid had a dramatic effect: excessive haemolysis ceased, and the rate of elimination of transfused red blood cells fell to normal. Thereafter the patient's own red blood cells increased and eventually reached normal.

Full data regarding the survival of transfused red blood cells in this and other cases will be given in a later paper with Dr. W. Walker, when the interplay of toxic, haemolytic, and nutritional factors in various types of megaloblastic anaemia will be discussed.

Summary

The injection of vitamin B_{12} in doses of 65 to 80 μg. was ineffective in six patients with megaloblastic anaemia associated with pregnancy or the puerperium, all of whom subsequently responded to folic acid, usually 2.5 mg. daily.

The aetiological significance of these findings is discussed.

We are indebted to the medical, nursing, technical, and clerical members of the staff for their co-operation, and to colleagues in the obstetrical units of the Princess Mary Maternity Hospital and Newcastle-upon-Tyne General Hospital for referring untreated cases of megaloblastic anaemia. We are also indebted to Dr. E. Lester Smith and his colleagues in the Research Division of Glaxo Laboratories Limited, Greenford, who prepared and supplied all the crystalline vitamin B_{12} used in these investigations. In addition we wish to thank Glaxo Laboratories Limited for a research grant made to King's College, University of Durham, which provided for the Research Fellowship held by one of us (R. B. T.).

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VITAMIN B_{12} IN MACROCYTIC ANAEMIA OF PREGNANCY AND THE PUERPERIUM

BY

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It has been conclusively proved that vitamin B_{12} is haemopoietically effective in Addisonian pernicious anaemia and subacute combined degeneration (West, 1948; Berk *et al.*, 1948; Ungley, 1948a; Spies *et al.*, 1949; Hall and Campbell, 1948a, 1948b), in nutritional macrocytic anaemia and sprue (Spies *et al.*, 1948a, 1948b, 1949), and in tropical macrocytic anaemia (Patel, 1948). But the reported results of treatment of macrocytic anaemia of pregnancy with vitamin B_{12} have not been encouraging. Ungley (1948b) was unsuccessful with 65 μg. of vitamin B_{12} in a case of megaloblastic anaemia of pregnancy which responded afterwards to 2.5 mg. of folic acid (pteroylglutamic acid) given daily. Bethell *et al.* (1948) treated one case of puerperal macrocytic anaemia with 1 μg. of vitamin B_{12} for 10 days without any response, though it subsequently responded to 10 mg. of folic acid administered daily. Day *et al.* (1949) treated a case of macrocytic anaemia of pregnancy with a total of 27.5 μg. of vitamin B_{12} without any response, though there was subsequent response to folic acid.

We here present the results of the treatment of five cases of macrocytic anaemia of pregnancy and the puerperium with vitamin B_{12}.

Method

The cases were admitted to the King Edward Memorial Hospital, Bombay. After obtaining the usual medical history and giving a thorough physical examination, the following laboratory investigations were carried out: red blood cell, haemoglobin, platelet, reticulocyte and leucocytic counts, cell volume and various indices, van den Bergh reaction, icterus index, total serum protein, gastric analysis with or without histamine stimulation, stool and urine examination, Wassermann or Kahn reaction, and bone-marrow smears. Reticulocyte counts were done daily. Red blood cell, haemoglobin, and cell-volume readings were obtained on alternate days after starting treatment. Vitamin B_{12} was administered only after the blood count had become stationary or had decreased on two consecutive counts during the preliminary period of waiting. The sternal marrow was investigated before the institution of treatment and on the day following the reticulocyte peak. The patients were given hospital vegetarian diet (consisting

TABLE I.—*Haemopoietic Response*

Case No.	R.B.C. (millions c.mm.		Haemoglobin (g.%)		Packed Cell Volume		Reticulocytes		W.B.C. (per c.mm.)	
	Initial	After 14 Days	Initial	After 14 Days	Initial	After 14 Days	Day of Peak	%	Initial	After 14 Days
1	0·72	1·50	3·50	5·00	10·5	18·0	5th	15·6	3,900	10,100
2	0·87	2·35	4·00	8·25	14·0	30·5	6th	17·4	3,500	2,600
3	1·00	2·91	2·00	7·25	11·0	27·5	5th	24·2	4,800	8,600
4	0·92	2·35	3·50	6·75	10·5	22·0	5th	27·3	6,700	6,200
5	0·96	2·03	3·50	6·50	12·0	22·0	8th	20·0	12,000	7,200

of rice, dal, bread, cooked vegetables, and bananas). No other treatment was given except vitamin B_{12} in the dosage stated.

Dosage.—In all cases except one 40 μg. was given in a single intramuscular injection. The period of observation was 14 days, and improvement was judged by the formula of Dyke and Della Vida (1942), in which I = 0.93–0.214Eo, where I is the weekly increase in millions of red blood cells and Eo is the original level of red blood cells (Table I).

Case 1

A woman aged 30 was admitted in the eighth month of her fourth pregnancy complaining of increasing general weakness for the past two years, which had become marked during the past three months. She had pronounced nausea and vomiting during the earlier months of pregnancy, and this had prevented her from taking adequate nourishment. Slight nausea persisted throughout the pregnancy. She gave a history of diarrhoea off and on during the previous three months. One month before admission she had had irregular fever with chills for 21 days. She also complained of stomatitis and had had oedema of the feet for a month. There had been no difficulties in previous pregnancies and her family history was without significance. She used to eat a mixed diet before her illness, but owing to her nausea and diarrhoea she now ate mostly rice and dal. Her economic status was poor.

On examination she had puffiness of the face and oedema of the legs, and was very severely anaemic. Her tongue was smooth and red at the tip. Examination of her heart disclosed a haemic murmur. Other systems were normal. Her blood count was: red cells 880,000 per c.mm.; haemoglobin 3.5 g.%; leucocytes, 4,400 per c.mm.; M.C.V. 125 μ^3; M.C.H.C., 31.8%; platelets, 80,000 per c.mm.; icterus index, 5; van den Bergh test, negative. Total proteins were 5.14 g. per 100 ml. The bone marrow was megaloblastic. The gastric contents contained free hydrochloric acid. The Wassermann reaction was negative. Analysis of urine revealed nothing abnormal. Stool examination showed the presence of ova of roundworm and cysts of *Entamoeba histolytica.* A blood count two days later showed: red cells, 720,000 per c.mm.; haemoglobin, 3.5 g.%; M.C.V., 145.8 μ^3; M.C.H.C., 33.3%; leucocytes, 3,900 per c.mm.

At this stage the patient was given 40 μg. of vitamin B_{12} in one single injection. The reticulocyte peak occurred on the fifth day (highest 28.9%). She felt hungry on the third day and by the fifth day she was very hungry. Most of her symptoms improved, including the glossitis. The count at the end of 10 days was: red cells 1,690,000 per c.mm.; haemoglobin, 5.5 g.%; M.C.V., 109.3 μ^3; M.C.H.C., 29.9%; leucocytes, 9,750 per c.mm. The blood count at the end of 14 days was: red cells 1,500,000 per c.mm.; haemoglobin, 5 g.%; M.C.V., 120 μ^3; M.C.H.C., 27.7%; leucocytes, 9,700 per c.mm. On the sixth day the bone marrow still showed a few megaloblasts. On the eighteenth day the red blood cells numbered 1,530,000, and the haemoglobin was 4.75 g.%; she was at this stage treated with crude liver extract, as the supply of vitamin B_{12} was insufficient. She left the hospital against medical advice.

Comment.—The response to 40 μg. of vitamin B_{12} was suboptimum and was maximum about the tenth day; the blood level declined by the eighteenth day. This suggests that 40 μg. was the suboptimum dose. It is also corroborated by the failure of that amount of vitamin B_{12} to convert the bone marrow to a completely normoblastic picture (Table II).

TABLE II.—*Response of Bone Marrow*

Case No.	Time	Pro-erythroblasts	Megaloblasts			Normoblasts		
			Early	Int.	Late	Early	Int.	Late
1	Before treatment	—	8·0	16·0	4·0	—	—	0·4
	After "	0·6	1·2	0·2	0·6	1·2	1·8	2·0
2	Before "	1·4	3·4	6·6	3·2	1·4	7·6	24·4
	After "	1·8	—	1·8	2·8	2·0	10·0	32·0
3	Before "	1·0	2·4	1·2	0·4	0·2	5·8	36·0
	After "	1·2	—	—	0·4	—	1·6	15·8
4	Before "	2·8	8·8	13·2	4·4	3·2	6·4	1·6
	After "	2·2	—	0·2	1·0	4·6	8·4	20·4
5	Before "	0·0	12·6	20·8	4·6	1·6	7·6	9·6
	After "	Not done						

Case 2

A woman aged 25 was admitted in the sixth month of her second pregnancy for general weakness and giddiness of 12 months' duration. She had left Pakistan 14 months before owing to the partition of the country, and her first child had been delivered within two months of her arrival in India. Since then she had been ailing. She had had an attack of malaria lasting for a period of two months, for which she had been treated in a refugee camp. She had had stomatitis off and on, and diarrhoea, four to five stools a day, for a period of five months. She also complained of pain in the chest, with a blood-stained sputum, two months previously. Her appetite had been poor for the past five months.

On examination she was pale and emaciated, her tongue was pale and smooth, and her spleen was palpable four finger-breadths below the costal margin. Other systems were normal. A blood count showed: red cells, 870,000 per c.mm.; haemoglobin, 4 g.%; M.C.V., 160.9 μ^3; M.C.H.C., 28.5%; leucocytes, 3,500 per c.mm. The van den Bergh reaction was negative, and the icterus index was 5. The bone marrow showed a megaloblastic picture. Platelets numbered 85,200 per c.mm., the Wassermann reaction of the blood was negative, and total proteins were 6.72 g. per 100 ml. Analysis of the urine showed nothing abnormal. Stool examination revealed a few ova of *Ancylostoma duodenale,* and the gastric contents contained free acid.

The patient came from a very poor family. Her diet was mixed, but owing to stomatitis and diarrhoea she could not eat more than small quantities of rice and dal. Her blood count two days after admission was: red cells, 840,000 per c.mm.; haemoglobin, 3.5 g.%; M.C.V., 190.4 μ^3; M.C.H.C., 21.8%; leucocytes, 2,700. She was given 40 μg. of vitamin B_{12}. She felt hungry on the third day and her diarrhoea subsided within a week. The highest reticulocyte count was 17.4% on the sixth day. At the end of 14 days her blood count was: red cells, 2,350,000 per c.mm.; haemoglobin, 8.25 g.%; M.C.V., 123.3 μ^3; M.C.H.C., 27%; leucocytes, 2,650 per c.mm. The day after the reticulocyte crisis the bone marrow still contained a few megaloblasts. On the nineteenth day after the institution of treatment her blood count was still improving: red cells, 2,770,000 per c.mm.; haemoglobin, 9 g.%; M.C.V., 120.9 μ^3; M.C.H.C., 26.8%; leucocytes, 3,600. She left the hospital at this stage, as she had improved and was anxious to look after her first child.

Comment.—The response to 40 μg. of vitamin B_{12} was optimum.

Case 3

A woman aged 22 was admitted to hospital in the eighth month of her fourth pregnancy. She had had general weakness for three months, low fever for 15 days, oedema of feet for five days, and constipation and dry cough for a week. She had a similar history during her previous pregnancies. She was a refugee from Pakistan.

On examination she was pale, with puffiness of the face and oedema of the feet. Her tongue was smooth and pale. Other systems did not reveal any abnormality. Her blood count was: red cells, 1,000,000 per c.mm.; haemoglobin, 2 g.%; M.C.V., 110 μ^3; M.C.H.C., 18.1%; leucocytes, 4,800 per c.mm. The van der Bergh reaction was negative, and the icterus index was 3. Platelets numbered 72,000 per c.mm. The Wassermann reaction of the blood was negative. The bone marrow showed megaloblastic reaction. Gastric analysis revealed the presence of free acid. A few pus cells were seen on microscopical examination of the urine. Stool examination revealed a few cysts of *Giardia lamblia.* Serum proteins were 5.47 g.%. Two days later her blood count was: red cells, 980,000 per c.mm.; haemoglobin, 2 g.%; M.C.V., 122.8 μ^3; M.C.H.C., 16.6%; leucocytes, 4,200 per c.mm. She was given 40 μg. of

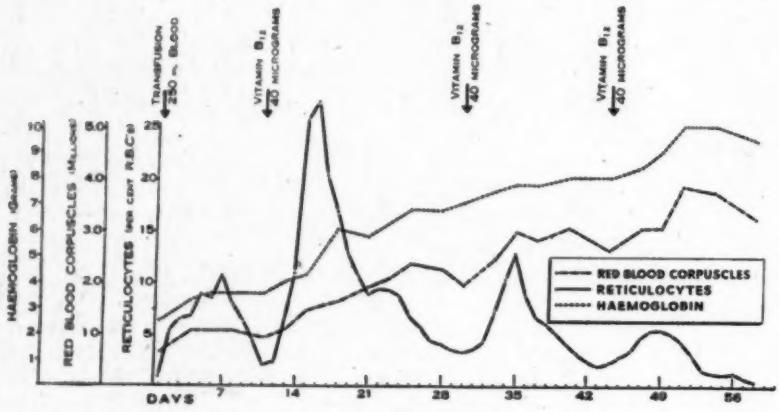

FIG. 1.—Case 4.

vitamin B_{12}. The highest reticulocyte count was 24% on the fifth day. Her blood count at the end of 14 days was: red cells, 2,910,000 per c.mm.; haemoglobin, 7.25 g.; M.C.V., 94.4 μ^3; M.C.H.C., 26.3%; leucocytes, 8,600 per c.mm. Her blood count increased during the next few days, when she had labour pains and delivered prematurely. Her bone-marrow picture on the day after the highest reticulocyte count had turned completely normoblastic.

Comment.—The response to 40 μg. of vitamin B_{12} was optimum.

Case 4

A 16-year-old primipara was admitted to hospital in the sixth month of pregnancy. She complained of general weakness for three months, dyspnoea on exertion for eight days, cough with expectoration for one and a half months, sore tongue for 15 days, backache, and pain in the abdomen. The usual morning sickness in the early period of pregnancy had occurred. She had had attacks of fever, probably malaria, two years previously.

On examination she was pale, with puffiness of the face, and her tongue was smooth and red at the tip and margins. Her spleen was palpable two fingerbreadths below the costal margin; the liver was not palpable. There was a haemic murmur. Other systems were normal. She did not give any history of abortions. On admission her blood count was: red cells, 630,000 per c.mm.; haemoglobin, 2.5 g.%; M.C.V., 126.9 μ^3; M.C.H.C., 31.2%; leucocytes, 8,300 per c.mm. (polymorphonuclear leucocytes 60%, lymphocytes 38%, eosinophils 2%, monocytes *nil*). The van der Bergh reaction was negative, and the icterus index was 5. The Kahn reaction was negative. Serum proteins were 5.14 g.%. Examination of the stool and urine revealed nothing abnormal. Gastric analysis disclosed the presence of free acid. Marrow from the sternum showed megaloblastic reaction. The patient was transfused with 250 ml. of blood. The blood count after transfusion was: red cells, 1,040,000 per c.mm.; haemoglobin, 3.25 g.%; M.C.V., 100 μ^3; leucocytes, 5,400. It remained at that level for five days. On the eleventh day after transfusion the blood level was: red cells, 920,000 per c.mm.; haemoglobin, 3.5 g.%; M.C.V., 118.4 μ^3; M.C.H.C., 33.3%; leucocytes, 6,700 per c.mm. At this stage she was given 40 μg. of vitamin B_{12}. The highest reticulocyte response was 27.3% on the fifth day after the first injection (Fig. 1). On the seventh day the bone marrow had turned normoblastic except for a few megaloblastic cells. Her appetite increased by the fourth day and she felt better. Her stomatitis improved by about the eighth day. The blood count on the fourteenth day was: red cells, 2,350,000 per c.mm.; haemoglobin, 6.75 g.%; M.C.V., 93.6 μ^3; M.C.H.C., 30.6%.

The blood count on the seventeenth and twentieth days was about the same, so on the latter day she was given a second injection of 40 μg. of vitamin B_{12}. A reticulocyte peak was 12.8% on the fifth day after the second injection. The blood count at the end of the tenth day after the second injection was: red cells, 3,020,000 per c.mm.; haemoglobin, 8 g.%; M.C.V., 86 μ^3; M.C.H.C., 32.5%. The blood count on the twelfth and fourteenth days was slightly less than the above, and so a third injection of vitamin B_{12} (40 μg.) was administered on the latter of these days. The reticulocyte peak was 5% on the fifth day. The blood count on the tenth day after the third injection was: red cells, 3,720,000 per c.mm.; haemoglobin, 10 g.%; M.C.V., 86.2 μ^3; M.C.H.C., 31.2%. On the fourteenth day after the third injection it was: red cells 3,210,000 per c.mm.; haemoglobin, 9.5 g.%; M.C.V., 96.5 μ^3; M.C.H.C., 29.6%. At this stage the patient was given 20 μg. of vitamin B_{12}, but she could not be persuaded to stay in the hospital any longer. She kept well and was delivered uneventfully at full term, at a place outside Bombay.

Comment.—This case of pregnancy anaemia was followed during the patient's 55-days' stay in hospital. Vitamin B_{12}, in 40-μg. dosage, was effective, and produced optimum response, but the effect did not last beyond the tenth day after each injection in all the three periods of 14 days. The blood level reached its highest by the tenth day and remained stationary or had diminished by the fourteenth day. This suggests that in this particular case 40 μg. of vitamin B_{12} is just enough to produce the optimum effect, or perhaps slightly less than the amount needed.

Case 5

A woman aged 25 was admitted to hospital for increasing general weakness for the past six months, which had worsened since the delivery of an eighth-months child six weeks before. Her weakness increased to such an extent that she had been bedridden during the last 15 days. She also complained of dyspnoea on exertion, palpitation, giddiness, anorexia, stomatitis, low fever, occasional attacks of diarrhoea and vomiting, and loss of weight. All these symptoms were present during her pregnancy, but she gradually became worse during the last six weeks. She was a 3-para, and her previous two deliveries were normal. There was no relevant history of previous illness.

On examination she was very pale, the tongue was pale and smooth, the liver and spleen were not palpable, and a haemic murmur was heard at the cardiac area. Other systems were normal. A blood count showed: red cells, 680,000 per c.mm.; haemoglobin, 3 g.%; leucocytes, 8,200 per c.mm. She

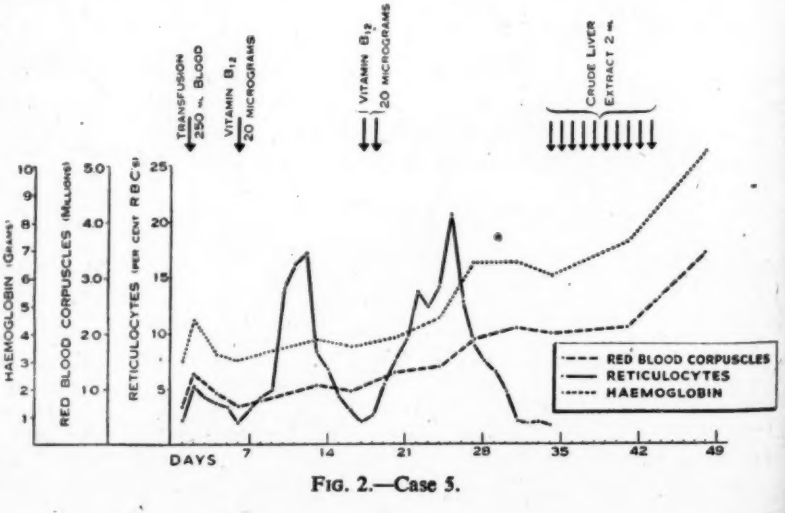

FIG. 2.—Case 5.

was given a blood transfusion of 250 ml. The blood level after transfusion increased as follows: red cells, 1,240,000 per c.mm.; haemoglobin, 4.5 g.%; M.C.V., 112.9 μ^3; M.C.H.C., 32.1%; leucocytes, 8,750 per c.mm. Five days after blood transfusion the blood level declined: red cells, 680,000 per c.mm.; haemoglobin, 3 g.%; M.C.V., 132.3 μ^3; M.C.H.C., 33.3%. Other findings were icterus index, 6; indirect van den Bergh reaction, negative; differential leucocytic count, polymorphonuclear leucocytes 60%, lymphocytes 39%, eosinophils 1%, monocytes *nil*. There were 12% normoblasts in the peripheral blood smear. The Kahn reaction was negative; serum protein 5 g.%. Urine and stool examination revealed nothing abnormal. The gastric contents contained free acid, and the bone marrow was megaloblastic.

She was given 20 μg. of vitamin B_{12}. The highest reticulocyte peak was 17% on the sixth day after the starting of treatment (Fig. 2). The blood count increased on the seventh day: red cells, 1,040,000 per c.mm.; haemoglobin, 3.75 g.%; M.C.V., 120 μ^3; M.C.H.C., 31.2%. On the tenth day it decreased: red cells, 960,000 per c.mm.; haemoglobin, 3.5 g.%; M.C.V., 125 μ^3; M.C.H.C., 29.1%; leucocytes, 6,500 per c.mm. She felt better and her appetite had improved on the fourth day, but from the eighth day onwards her general condition deteriorated. At this stage she was given 20 μg. of vitamin B_{12} on two consecutive days. The reticulocyte peak (20.8%) occurred on the eighth day after the second injection. Her general condition improved considerably. She regained her appetite and her looseness of bowel had improved. Her blood level on the tenth day after the second injection was: red cells, 1,850,000 per c.mm.; haemoglobin, 6.5 g.%; M.C.V., 121.6 μ^3; M.C.H.C., 28.9%. On the fourteenth day it was: red cells, 2,030,000 per c.mm.; haemoglobin, 6.5 g.%; M.C.V., 108.3 μ^3; M.C.H.C., 29.5%. On the seventeenth day the blood level declined: red cells, 1,930,000 per c.mm.; haemoglobin, 6 g.%; M.C.V., 106.1 μ^3; M.C.H.C., 29.2%. She was further treated with crude liver extract owing to the scarcity of vitamin B_{12}.

Comment.—Anaemia in this case was present during the later part of pregnancy, and remission did not occur after the termination of pregnancy as it sometimes does. On the contrary, the condition deteriorated. On this account the case is considered as one of pregnancy anaemia treated during the puerperium. Injection of 20 μg. of vitamin B_{12} produced partial improvement, both clinical and haematological, but this had declined by the tenth day. While 40 μg. produced a haematological response which was maximum by the tenth day and was sustained till the fourteenth day, it was suboptimum judged both by reticulocyte response and by the red blood cells and haemoglobin. This case also illustrates that more than 40 μg. of vitamin B_{12} is needed to produce optimum haematological improvement even during a period of 10 days.

Discussion

Four cases of macrocytic anaemia associated with pregnancy and one in which anaemia manifested itself during pregnancy and worsened after delivery were successfully treated with vitamin B_{12} isolated from liver. In the fifth case 20 μg. of vitamin B_{12} had slight and temporary beneficial effect both clinically and haematologically, and 40 μg. had better but suboptimum effect. In Case 1 40 μg. produced a suboptimum effect; but the same dosage was effective in Cases 2, 3, and 4. In Cases 1, 4, and 5 the maximum haemopoietic effect was observed on about the tenth day after the administration of vitamin B_{12}, and thereafter either there was no further improvement in the blood level or it declined. It can therefore be inferred that 40 μg. or more given in a single injection is necessary to produce an optimum response during the period of ten days—that is, about 4 μg. or more a day as compared with 1 μg. a day in a case of Addisonian pernicious anaemia. This is also about the optimum dose for an average case of tropical macrocytic anaemia (unpublished results). Callander (1944) writes: "Generally speaking, in both the tropical anaemia and the pernicious anaemia of pregnancy the amount of liver required seems to be greatly in excess of that needed in the ordinary case of Addisonian anaemia." The ineffectiveness of vitamin B_{12} in macrocytic anaemia in pregnancy and the puerperium found by previous workers is probably due to insufficient doses used.

In Case 4, 120 μg., given in three separate injections of 40 μg., each at intervals of 14 days, raised the red blood cells from 880,000 to 3,720,000 per c.mm. in the course of 44 days. It is difficult to predict how much would be required to take the blood level to normal, but a further similar amount would in all probability be necessary.

Summary

The effect of vitamin B_{12} is described in five cases of macrocytic anaemia of pregnancy and the puerperium. The patients were treated in Bombay. The first case was given 40 μg. of vitamin B_{12} and responded moderately well; the second and third cases responded well to the same dose; the fourth case responded less strikingly to a dose of 40 μg., and in the fifth case a dose of 20 μg. was found to have a partial and temporary effect. From these results it is inferred that 40 μg. or more, in a single injection, is required to produce an optimum response during a period of ten days—that is, the condition requires at least 4 μg. of vitamin B_{12} a day for successful treatment.

We wish to thank the Dean of King Edward Memorial Hospital, Bombay, for facilities in treating the cases. We are grateful to the authorities of N. M. Wadia Maternity Hospital, particularly Dr. Patharkar, for referring these cases to us for treatment. Vitamin B_{12}, isolated from liver, was supplied by Dr. Lester Smith, of Glaxo Laboratories Limited, to whom our thanks are due.

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A Working Party is to be set up at the Ministry of Health to investigate the suitability of various materials for small-diameter water pipes, especially for farm supplies. A material commonly used for this purpose at present is galvanized steel, but in some areas pipes made from it are liable to severe external corrosion when laid underground, or to internal corrosion due to the action of the water. It is in these areas that a reasonably inexpensive alternative is required. The Working Party will deal mainly with plastics and other non-metallic materials. The chairman of the Working Party will be Mr. H. W. Coales, of the Ministry of Health.

CASES OF HYPOPITUITARISM

BY

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The description of the syndrome of hypopituitarism has been modified considerably in recent years. Certain so-called "characteristics," such as emaciation and progeria, which were previously regarded as essential to the diagnosis, are now recognized as being so unusual that their occurrence even throws doubts on the diagnosis. The four photographs of true cases of hypopituitarism illustrate the normal state of nutrition of these patients and the absence of body hair. The purpose of this paper is to present a few reliable examples of hypopituitarism in order to illustrate some aspects of the symptomatology and pathology. A general account of the syndrome is not necessary here, as the ground has been covered in a recent review of the literature (Sheehan and Summers, 1949). Patients may show predominantly one aspect or other of the syndrome or any combination of these: genital superinvolution, deficiency of thyroid or adrenal cortical function, hypoglycaemia. The irregularities seem to depend on two factors: (1) the amount of anterior pituitary parenchyma which has been destroyed, and (2) the time which has elapsed since the destruction, because the secondary effects on other endocrines may take years to reach a grave degree.

The first four of our cases have pathological proof of the pituitary lesion. In the other four the history gives very strong presumptive evidence of the sudden destruction of most of the anterior lobe by a post-partum necrosis. The subsequent clinical course in these four patients was typical, though the syndrome was in some respects incomplete. Many of the more significant biochemical and haematological data in the following records are given in Tables I and II.

Case 1

This patient was a man who died in 1949 at the age of 67. His symptoms fell into two groups: (*a*) those due to small cerebral softenings, and (*b*) those due to hypopituitarism.

(*a*) He was quite well until 1941, when he had a slight "stroke" which produced great weakness of the legs. From 1946 onwards he had several similar slight strokes, developed symptoms of Parkinsonism, and was confined to bed from the summer of 1948 as a result of flexion deformities of the knees. In the last two months he had urinary incontinence.

(*b*) In 1944 he became very weak and was in hospital with a diagnosis of myxoedema, hypochromic anaemia, and vitamin-C deficiency. At that time he had achlorhydria. His symptoms improved slightly after treatment with thyroid and iron, but were worse again in 1946. At his last admission to hospital, two months before death, it was noted that his skin was very white, soft, and smooth. His head hair was normal and grey, but the eyebrows were very scanty over the outer half. A moustache was present, but the beard grew so slowly that shaving was needed only about every 10 days. There was no hair on axillae, pubis, or trunk. Nutrition was normal. The Wassermann reaction was negative and the C.S.F. normal. Radiological abnormalities were not found.

He became comatose one evening and died next morning.

TABLE I.—*Insulin-tolerance Tests (0.03 units Insulin I.V. per kg.)*

Minutes	Blood Sugars: mg. per 100 ml.					
	Case 1	Case 3	Case 5	Case 6		Case 8
				Age 40	Age 41	
0 ..	95	60	64	62	86	70
30 ..	48	30	55	42	56	41
60 ..	45	28	38	42	47	62
90 ..	50	—	45	—	54	67
120 ..	—	27	41	54	62	72

Pathological Findings

At necropsy the external appearances were the same as during life.

The pituitary was of normal size, but on section the anterior lobe had a grey gelatinous appearance with a small brown nodule in front. Histologically the anterior lobe consisted almost entirely of fibrous tissue, which was rather loose centrally but more condensed towards the surface. Near the interlobar septum there was a small fibrotic mass of remaining parenchyma cells, representing not more than 5% of the original anterior lobe. Most of these cells were chromophobes and eosinophils, with only occasional basophils. At the front of the scarred anterior lobe there was a small adenoma 2.5 mm. in diameter; this consisted of small round cells arranged in pseudo-rosettes, and appeared to be a variant of a chromophobe adenoma. The posterior lobe was normal, but had much basophil infiltration. The arteries supplying the pituitary appeared healthy.

The thyroid (9.4 g.) was small and consisted of very atrophic acini containing colloid. The adrenals (2.4 g. and 2.6 g.) had a thin cortex (0.2 to 0.4 mm.), with normal arrangement apart

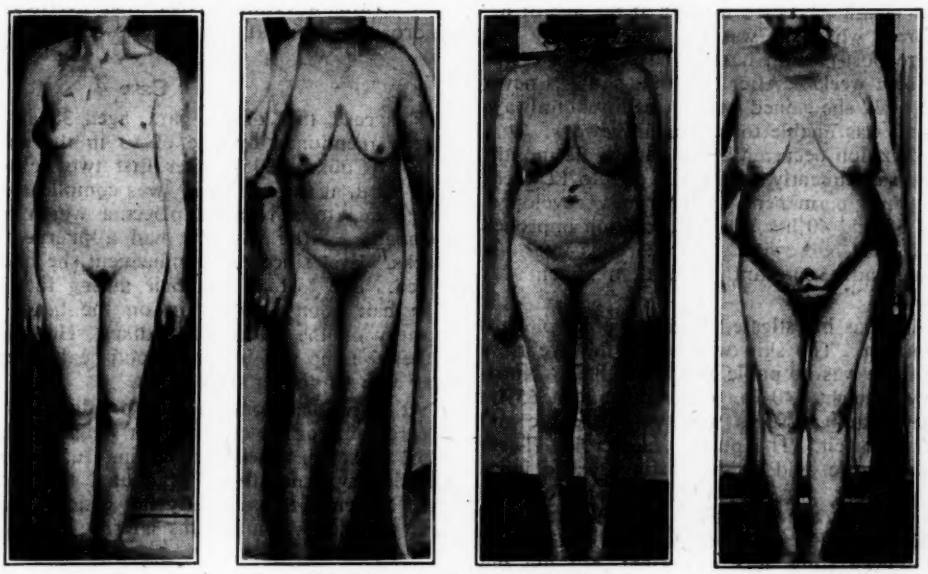
TABLE II.—*Haematological and Biochemical Data*

	Case 1 Age 67	Case 2 Age 49	Case 3		Case 4 Age 37	Case 5 Age 63	Case 6 Age 41	Case 7 Age 32	Case 8 Age 38
			Age 55	Age 62					
Haematology:									
Hb %	77	100	95	93	80	80	82	100	92
R.B.C. in millions ..	4·1	6·2	5·0	4·8	4·7		3·8	5·7	5·3
W.B.C. in thousands ..	11·0	6·6	5·6	10	6·4		8·0	6·0	7·0
Polymorphs %	42	30	44	70	66		37	36	
Lymphocytes %	48	67	54	17	29		58	49	
Mononuclears %	4	3	2	5	4		5	15	
Eosinophils %	5	0	0	2	1		0	0	
Mean corp. diam. (μ) ..	7·5		6·8		6·8		7·0	6·9	6·9
Blood biochemistry:									
Urea, mg. per 100 ml. ..	57		35		30	40	23	28	32
Cholesterol ,, ,, ,, ..	165		230 to 500	205 to 235	145	87	220 to 240	267	212 to 294
Chlorine ,, ,, ,, ..	345			326			310 to 375	351	360
Sodium ,, ,, ,, ..				275		330	300 to 330	315	278
Potassium ,, ,, ,, ..						15	18 to 20	20	20·5
Calcium ,, ,, ,, ..			11·6		10·8			10·2	9·4
Phosphorus ,, ,, ,, ..								2·7	4·1
Fasting sugar .. ,, ..	92		80	37 to 55	85	64	62 to 75	45	72
Other data:									
B.M.R. %			−19	−32	−23	−38	−33 to −50	+4	−3 to −12
Urea clearance test % ..			60				53 to 61	102	72
17-ketosteroids, mg. per day				0		0·4	0·0 and 0·8	0	0·8 and 1·5
B.P.	140/90		120/80	110/90		110/80	125/70	110/80	126/88

from the atrophy, and normal lipoid content. The capsule was very thick, and there was a fibrous band between the cortex and the medulla. The medulla appeared normal. The testes (right 9.1 g.) had very atrophic hyalinized remains of tubules, with much fibrosis between them, and no interstitial cells. The prostate was very small, with atrophic glands remaining in apparently normal muscular tissue. The parathyroids were large and orange-coloured; they showed chief cells and numerous oxyphil cells. The pancreas was small; it contained large numbers of islets of normal size and healthy appearance. No remains of the thymus could be found.

The brain showed numerous small areas of old softening in the right basal ganglia. There was much atheroma of cerebral arteries. The heart (295 g.) had dilated flabby ventricles, similar to those seen in myxoedema. Some old scarring of the mitral valve was present. The liver (850 g.) and spleen (85 g.) were small. The kidneys (65 g. and 53 g.) were atrophied but without fibrosis. The stomach showed a puckered but incompletely healed peptic ulcer on the lesser curvature.

Comment.—There is no direct evidence regarding the cause of the severe fibrous replacement of the anterior pituitary. The position of the residue of parenchyma, the absence of any scarring of the posterior lobe, and the associated cerebral lesions suggest that the original lesion of the anterior lobe was an ischaemic necrosis. It is of interest that the small chromophobe adenoma appeared quite healthy despite the gross changes around it. This adenoma seems to have had no secretory activity, as it did not prevent the development of the hypopituitarism. The gastric ulcer was an unexpected finding in a patient with hypopituitarism, particularly in view of the achlorhydria.



Typical cases of hypopituitarism.

Case 2

This patient, a nullipara, died in 1946 at the age of 50. Her previous history is incomplete; she had lived alone for some years, and the relevant information was obtained from her half-sister only after her death. She had rheumatic fever in childhood and much rheumatoid arthritis since then. She developed permanent amenorrhoea at the age of 24. At 30 her weight was 140 lb. (63.5 kg.) and her blood count was normal. At 37 she became a typist in a large business; she was a good worker, and was very interested in her occupation for the next eight years. At 35 she had no pubic hair; it is not known how long it had been absent before this. At 40 she had a nervous breakdown. Ever since then she was reserved and quiet, and would sit for hours without conversing. She wore thick clothes, summer and winter. At 49 she was pale and was treated for a time with iron, but a blood count showed no anaemia. She complained of pains in the knees, and was very round-shouldered. Her weight was 116 lb. (52.6 kg.).

During the last few months she was vaguely unwell. She stayed in bed on the day before death, and had vomited and become stuporous. She died in coma while being taken to hospital after an illness lasting about 24 hours.

Pathological Findings

At necropsy the body was of normal nutrition. The face was very pale; head hair was normal, eyebrows were scanty, and there was no pubic or axillary hair. The breasts were of normal size.

The sella turcica appeared empty on ordinary inspection. The infundibular stalk was plump and was attached to a tiny nodule of tissue lying in contact with and just in front of the dorsum sellae. Microscopical examination was made of this nodule and of the dura lining the floor of the sella. This showed that the nodule consisted of the fibrosed remains of the posterior lobe of the pituitary. In the dura covering the floor of the sella there was a very thin lamina of anterior lobe parenchyma. This was assessed as about 4% of the normal amount. It consisted of rather shrunken cells with neutrophil cytoplasm; there were no clear examples of eosinophil or basophil cells. Above it there was a thin shaggy layer of acellular fibrous tissue. The stalk was normal and vascular; it had a thin pars tuberalis of small shrunken cells, and there was a small focus of fibrinoid change on the back of the stalk. The hypothalamus appeared normal.

The thyroid weighed 13 g. It showed considerable fibrosis and numerous areas of lymphocytic infiltration; the remaining acini were very small and atrophic, with very flat epithelium but with normal colloid in the lumen. The adrenals weighed 3.1 g. together. The fibrous capsule was very much thickened. The cortex was represented only by short columns of cells with no zonal arrangement and with only little lipoid. There was no fibrosis between these cell columns except directly beneath the capsule. The thickness of the cortex varied from 0.05 to 0.2 mm. There was no fibrosis between cortex and medulla. The medulla appeared small but normal histologically.

The uterus was very small, weighing 11 g., and its overall length was 45 mm. The myometrium was 4 mm. thick and was extensively fibrosed; the remaining muscle cells had very little cytoplasm. The endometrium was 0.1 mm. thick, and histologically was just a thin fibrosed layer in which there were scattered small cystic glands. The ovaries were shrunken to flat disks made up of medullary tissue covered by a thin layer of cortical stroma in which there were no germinal cells or corpora albicantia. The heart (250 g.) showed severe mitral stenosis. The liver (1,220 g.) and spleen (260 g.) were rather congested. The pancreas (70 g.) contained very numerous islets which were all small. The kidneys were small (70 and 80 g.) but were normal histologically, apart from minor ischaemic scars at the surface. The aortic lymph nodes had no germinal centres in the follicles.

Comment.—This is an example of the pathological lesion which is described, for lack of a better term, as "empty

sella," and which seems to be the final scarred stage of some previous acute or subacute pathological process, such as giant-cell granuloma, cystic degeneration, or, in some cases, an ischaemic necrosis. In the present case there is no pathological evidence of giant-cell granuloma or any history to indicate an ischaemic necrosis. The rather degenerate appearance of the shaggy fibrous tissue which lies above the pituitary residue suggests that the original lesion may well have been a cystic degeneration which had progressed so far that only a thin layer of the lower surface of the gland remained.

The duration of the lesion is uncertain. The onset of the amenorrhoea at the early age of 24 suggests that some pituitary damage may have occurred then, but there were no further symptoms which could be attributed to hypopituitarism until about the age of 35 to 40. Presumably the lesion was of slow progressive development. The manner of death was typical of a severe hypopituitarism which has resulted in great atrophy of the adrenal cortex.

Case 3

This patient was a 1-para who died in 1948 at the age of 62. Her pregnancy occurred when she was 26. The delivery was complicated by severe post-partum haemorrhage, and she was dangerously ill for some weeks. After that time she was never well. Up to the age of 32 she gained weight steadily but always felt cold and tired and was unable to do her housework. It is of interest that menstruation occurred at 13, 24, and 32 months after the delivery and subsequently at intervals of 6 to 12 weeks to the age of 32, when permanent amenorrhoea developed. Between the ages of 33 and 40 her general condition improved enough for her to do her housework, but after this interlude she was an invalid under constant medical treatment for "weakness and anaemia."

At the age of 55 she was investigated from the point of view of endocrine dysfunction. The skin was white, the eyebrows were very thin, and there was no pubic or axillary hair. Nutrition was satisfactory: weight 140 lb. (63.5 kg.), height 65 in. (165 cm.). The uterus and passages were very atrophic and the thyroid could not be felt. The pulse rate was 66. There was some free hydrochloric acid in the fasting gastric juice. The Wassermann reaction was negative, and radiological examination showed no abnormalities. Treatment with thyroxine raised the B.M.R. a little, lowered the blood cholesterol, and produced some loss of weight, but did not improve her general condition. After this she gradually developed general appearances suggesting myxoedema, with puffy eyes, a white face, dry but not scaly skin, some loss of head hair, great physical weakness, and very slow cerebration.

At age 62 a series of attacks of vomiting began and she was found to have hypoglycaemia, low blood sodium and chlorine, and other biochemical disturbances. Her weight was still 140 lb. Suitable treatment was instituted, but she developed jaundice (apparently an infective hepatitis), became moderately oedematous, and died two weeks later.

Pathological Findings

At necropsy the external appearances were as during life. The sella turcica appeared empty on first inspection, but more detailed examination showed a normal pituitary stalk attached to the shrunken posterior lobe at the back of the sella. Histological examination of the dura covering the floor of the sella showed a very thin lamina of anterior pituitary parenchyma just in front of the posterior lobe. This was 0.1 mm. in thickness and about 3 mm. long, and was estimated to represent about 5% of the original anterior lobe. All three types of cell could be identified, but most of the cells appeared to be of a weakly basophil variety. The surrounding fibrous tissue was loose and showed no inflammatory lesions.

The thyroid (14 g.) showed atrophic acini full of colloid, with much fibrosis and lymphoid infiltration. The adrenals (9.4 g. together) had thinning of the cortex to 0.3 to 0.4 mm., with considerable distortion of its pattern. The capsule showed great fibrous thickening, and the cortex was separated from the medulla by a fibrous layer. The parathyroids were of normal size, but contained no oxyphil cells. The uterus (58 g.) and ovaries (2.6 g. together) were atrophic, but there was still a thin endometrium remaining. The pancreas (90 g.) had islets of the normal number and size, but the β cells showed hydropic change. The viscera were not atrophied; heart 360 g., liver 1,300 g., kidneys 200 g. together, spleen 180 g. The only pathological lesions were a healing hepatitis, much cystitis with some old pyelonephritic scarring of the kidneys, and some recent infarcts in the lungs.

Comment.—This was pathologically a fairly typical example of an "empty sella." The probable aetiology in this case was a large post-partum necrosis of the anterior pituitary 36 years before the patient's death. It is, however, impossible to be sure that no further atrophic change developed in the gland during the last few years. The case illustrates some of the vagaries of the syndrome. Permanent amenorrhoea did not develop until six years after the delivery, and the syndrome was an incomplete one for many years. During the last few years she showed a myxoedematous type of hypopituitarism, but terminally had serious adrenal cortical insufficiency. The absence of microsplanchnia at necropsy is a further point of interest.

Case 4

This case, that of a 3-para, aged 38 at death in 1942, was briefly mentioned by one of us in the course of a previous article (Cooke, 1945). Her first two deliveries were normal. The third, at the age of 29, was complicated by much haemorrhage due to a retained placenta which had to be removed manually. After this she had a puerperal infection for six weeks. Ever since this confinement she had complete amenorrhoea. She lost all her hair during the puerperal infection. The hair soon grew again on the head, but returned only scantily on the pubes and axillae. Her skin was always dry. Otherwise she was in fairly good health, remained plump, and was able to do her housework.

At 37 she had some vaginal bleeding and was found to have a carcinoma of the cervix. Her weight at that time was 146 lb. (66.2 kg.) with a height of 65 in. (165 cm.). The Wassermann reaction was negative. Fractional test meal showed normal acid content. Subsequently her condition deteriorated steadily and she died seven months later.

Pathological Findings

At necropsy she was thin but not cachectic. The pituitary weighed 0.25 g. Its anterior lobe was considerably shrunken and flattened. Histologically it consisted almost entirely of a layer of loose fibrillary connective tissue, with a very thin layer of anterior pituitary parenchyma on the upper and lower surfaces of the scar. The total amount of this parenchyma was estimated as less than 10% of the original gland. The cells were of the three staining types in their usual proportions and appeared quite healthy. The posterior lobe was normal, apart from a small area of scarring at its posterior surface. The stalk was normal in size and structure.

The other endocrines and viscera were small: thyroid 12.4 g., ovaries 3.5 g. together, heart 220 g., liver 1,240 g., pancreas 55 g., kidneys together 135 g., spleen 120 g. The liver showed gross fatty change and the kidneys some pyelonephritis. The uterus was 65 mm. long, with myometrium 6 to 9 mm. thick; the cervix and surrounding structures were replaced by widespread carcinoma.

Comment.—The patient had a subtotal destruction of the anterior pituitary, almost certainly the result of a post-partum necrosis nine years before death. This had not as yet given rise to a severe degree of hypopituitarism; she seems to have been in relatively good health apart from the amenorrhoea and the lack of pubic and axillary hair. The terminal weight loss was a result of the carcinoma, and is clearly not attributable to the hypopituitarism.

Case 5

A 4-para, aged 63 in 1949, had three normal deliveries followed by lactation. Her fourth delivery, at 35, was complicated by ante-partum and post-partum haemorrhage. Her baby was stillborn and her breasts involuted at once without even becoming tense. After the delivery she had permanent amenorrhoea. The pubic hair, which had been shaved at the delivery, did not grow again and the axillary hair disappeared gradually soon after. Sweating, which had been rather heavy previously, ceased entirely after the delivery. She became slow in her movements, but was able to continue her housework. Her weight remained unchanged.

At age 63 she had a short attack of diarrhoea which was followed by semicoma for about two days. On subsequent examination her nutrition appeared to be normal—115 lb. (52.2 kg.), 61 in. (155 cm.). The face was extremely white, though the blood showed only a minor anaemia. The head hair was brown and of fine texture, the eyebrows were very thin, and the axillary and pubic hair were absent, though a few short hairs were present on the labia. The skin was dry everywhere and the axillae were free from any greasiness. The thyroid was impalpable. The pulse rate was 60. Examination of C.S.F. and urine, and full radiological investigations, showed no abnormality. The Wassermann reaction was negative.

Comment.—This patient seems to have had a subtotal post-partum necrosis 28 years ago involving about 90% of the anterior pituitary. The biochemical tests indicate a rather severe hypopituitarism, and this is supported by most of the history and the clinical findings. On the other hand, she is physically and mentally more active than is usual in patients with very severe degrees of pituitary loss. However, the recent episode of coma is of serious prognostic import.

Case 6

This patient, a 3-para aged 42 in 1948 whose earlier health was good, weighed 114 lb. (51.7 kg.) at 21 and 98 lb. (44.5 kg.) at 28, when she married. The last delivery, at the age of 36, was complicated by severe post-partum haemorrhage. There was no lactation or swelling of the breasts in the puerperium. At the end of the puerperium she had an attack of confusional insanity lasting two days, but recovered completely.

From the time of the delivery she had complete amenorrhoea, absence of libido, physical weakness so severe that she was unable to do simple housework, great sensitivity to cold, and absence of sweating of the axillae and of the rest of the body. At 40 she had a "nervous breakdown" and was three months in a mental hospital. Examination shortly afterwards showed extreme atrophy of the uterus, cervix, vagina, and vulva. There was no hair in the axillae or on the mons, but a small amount remained on the labia majora. The eyebrows were very thin, but the head hair was normal. The skin was very pale. She was of normal nutrition (weight 105 lb.—47.6 kg.—height 60 in. —152 cm.) and the breast contours were normal. Mentally she was rather quiet and apathetic, and replied slowly to questions. The glucose-tolerance test showed a flat curve. There was a histamine-fast achlorhydria.

Comment.—The patient seems to have had a severe post-partum necrosis six years before admission. The adrenal cortex still maintains satisfactory electrolyte balance, but the other biochemical tests show significant hypopituitarism.

Case 7

A 1-para aged 32 in 1945 had her only pregnancy at the age of 19. The delivery was by forceps; no further obstetric details are available. She was in bed for two months afterwards. The baby was breast-fed for three months. Ever since the delivery she had complete amenorrhoea and absence of libido. The pubic hair, which was shaved at the delivery, never returned. She never regained her strength and became very sensitive to cold. Her face, previously ruddy, became remarkably white. Her weight remained unchanged and she lost no teeth.

Examination showed severe atrophy of the entire genital tract; the cervix was flush with the vaginal vault and the uterus was too small for palpation. The head hair and eyebrows were normal, but there was no axillary hair and practically no pubic hair. The nutrition was normal and the patient did not appear apathetic. A fractional test meal showed a histamine-labile achlorhydria, and a glucose-tolerance test gave a flat curve.

Comment.—This patient presumably had a moderate-sized post-partum necrosis, leading to the destruction of perhaps 80% of the anterior lobe. This resulted in a partial syndrome involving the gonads, the genital tract, and the androgenic functions of the adrenals severely. On the other hand, the electrolyte balance and the functions of the thyroid remained almost unaffected. It is of considerable interest that this patient lactated after the delivery.

Case 8

This patient was a 5-para aged 38 in 1946. Her first four deliveries, at the age of 25 to 32, were normal. At 34 she had a twin pregnancy which terminated with severe accidental haemorrhage and profound shock. After this delivery she had permanent amenorrhoea but the libido was unchanged. The pubic hair disappeared, but the hair on the vulva remained; there had never been axillary hair. The eyebrows became thinned, her face became remarkably pale, and the areolar pigment disappeared from the nipples. Her weight remained unchanged—100 lb. (45.4 kg.), height 58½ in. (149 cm.). There was no undue sensitivity to cold. She was always tired, but was able to do some housework. She was not apathetic, and her speech was not hesitant or slow.

On examination the uterus was very small (2 in. (5 cm.) by sound) and the external os was flush with the vaginal vault. There was some senile vaginitis. The electrocardiogram was normal. Glucose-tolerance tests gave flat curves.

Comment.—This patient presumably sustained a post-partum necrosis of only moderate severity; it seems quite possible that almost a quarter of the anterior lobe remained alive. The resultant syndrome is thus only a partial one and is little more than a superinvolution of the uterus. The biochemical investigations show only minor deviations from the normal.

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An appeal has been made by Sir Oliver Harvey, the British Ambassador in Paris, on behalf of the Hertford British Hospital. This hospital, which has given attention to so many British subjects, was opened in Paris in 1879, the product of close Anglo-French friendship in the latter half of the nineteenth century. It was founded by Sir Richard Wallace, and on his death the buildings were made over to the British Government. Its affairs were managed by a committee of prominent members of the British colony and of the Embassy staff. To-day the Hertford Hospital has more than 60 beds, with wards for chronic cases and destitute patients, and a modern maternity block. There are up-to-date operating theatres and *x*-ray services, and a large out-patients' department with a dental section. The residents and nursing staff are British, and they are supported by many leading French consultants. The financial burdens of the hospital in recent years have increased alarmingly. The recent Anglo-French reciprocal social security agreement has not helped the hospital, because British subjects resident in France for less than six months are excluded from the right to free treatment. Unless the year's estimated deficit of £10,000 is made up there will be no course for the hospital but to close its doors, an event which Sir Oliver describes as unthinkable. Contributions may be sent to the Ambassador, c/o the Hospital Secretary, 48, rue de Villiers, Levallois, Seine.

MYXOMA OF THE LEFT AURICLE

BY

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Primary tumours of the heart are comparatively rare, and myxomata of the auricles form an important section of the innocent tumours. Some 95 cases of intra-auricular myxoma have so far been reported in the world literature. The majority (77) were in the left auricle. Not one of these cases was diagnosed during life. Mahaim (1945) collected 82 cases in his extensive review of cardiac tumours, and subsequent cases have been reported by Thompson (1944), Burnett and Davidson (1945), Straus and Merliss, 2 cases (1945), Field *et al.* (1945), Rasmussen, 2 cases (1945), Brown (1946), Anderson and Dmytryk (1946), Farreras Valenti *et al.* (1947), Alvayay *et al.* (1947), Macoun (1949), and Allison and Susmann (1949).

The object of this paper is to describe and discuss three additional cases of myxoma of the left auricle and to consider the value of the electrocardiogram as an aid to diagnosis.

Case 1

A woman aged 50 had a normal exercise tolerance and no history of serious illness until the age of 41. During the next five years her capacity for exercise gradually decreased until she became breathless at rest. In May, 1945, at the age of 46, she was admitted to Queen Elizabeth Hospital, Birmingham, after an attack of acute dyspnoea. A clinical diagnosis of atypical coronary thrombosis was made. Serial electrocardiograms were taken (Fig. 1). The dyspnoea was relieved after two weeks' rest in bed. Although the patient remained breathless on effort during the four years following discharge, she was able to undertake periods of sedentary work.

On February 15, 1949, she developed sudden pain and stiffness in the back of the neck together with increasingly severe breathlessness. Twenty-four hours later she was admitted urgently to the West Middlesex Hospital.

On examination she was seen to be very dyspnoeic, but lying flat in bed and producing frothy sputum. The face and extremities were strikingly cyanosed and cold, but the peripheral arteries were palpable. There was no engorgement of the neck veins. The pulse was irregular and its rate over 150. There was slight cardiac enlargement. The heart sounds were normal and no gallop rhythm was present. A soft apical systolic murmur was heard. The blood pressure was 115/? mm. Numerous crepitations were present over both lung fields. Marked neck rigidity was found, but there were no abnormal signs in the central nervous system; Kernig's sign was negative. A lumbar puncture showed the cerebrospinal fluid to be normal.

The dominating clinical picture was that of acute pulmonary oedema, but it was remarkable that when an attempt was made to sit the patient up to relieve the dyspnoea she insisted upon remaining flat. There was no change in the physical state until she died suddenly three hours after admission.

Necropsy. Myxoma Filling the Left Auricle: Pulmonary Oedema.—The heart weighed 415 g. Filling the left auricle was a pedunculated tumour, 6 by 4 by 3 cm., arising from the auricular septum in the region of the foramen ovale. An extension of the tumour passed through the mitral orifice and expanded into the upper part of the ventricle. This extension was demarcated from the main part of the tumour by a deep groove at the level of the mitral ring (Fig. 2). The tumour was rubbery in consistence, and its cut surface gelatinous. A large recent haemorrhage occupied the upper pole. The right auricle was dilated and its wall thickened (5 mm.). There was pronounced right ventricular hypertrophy (9–10 mm.). In all other respects the heart was normal. There was no evidence of old or recent coronary thrombosis. The lungs were oedematous. The brain, meninges, and all other organs were normal in appearance.

Histology.—The tumour was partly covered by a layer of flattened cells. Its substance consisted of a faintly eosinophilic hyaline stroma containing vacuoles. Running throughout were strands of endothelial cells with ovoid and vesicular nuclei (Fig. 3). There were also some scattered plasma cells and lymphocytes. A few capillaries were seen, and in some parts these were encircled by several layers of endothelial cells. Foci of haemorrhage, haemosiderosis, and calcification were present. A large amount of reticulin and a little collagen were demonstrated in the stroma. No mucin was present. The naked-eye and microscopical appearances of this tumour were typical of a cardiac myxoma.

Case 2

A man aged 73 was admitted to the West Middlesex Hospital on June 11, 1947. No history was obtained of recent or past cardiac symptoms, and there were no abnormal findings in the cardiovascular system other than a blood pressure of 168/65 mm. Radiology of the heart showed a normal size and outline. Further examination and investigation revealed the presence of chronic lymphatic leukaemia, and the patient died from this disease two months after admission.

Necropsy. Lymphatic Leukaemia: Myxoma of the Left Auricle.—The heart weighed 435 g. A mobile ovoid tumour, 4.5 by 3 by 1.5 cm., occupied more than half of the cavity of the left auricle. It was attached by a peduncle to the septal wall at the border of the foramen ovale. There was no occlusion by the tumour of the mitral valve or pulmonary veins. All other parts of the heart were normal, and the lungs showed only the changes of senile emphysema. Leukaemic deposits were present in the liver, spleen, and lymph nodes.

Histology.—Sections of the cardiac tumour were similar to those in Case 1, except that the endothelial cells were arranged in groups rather than in strands.

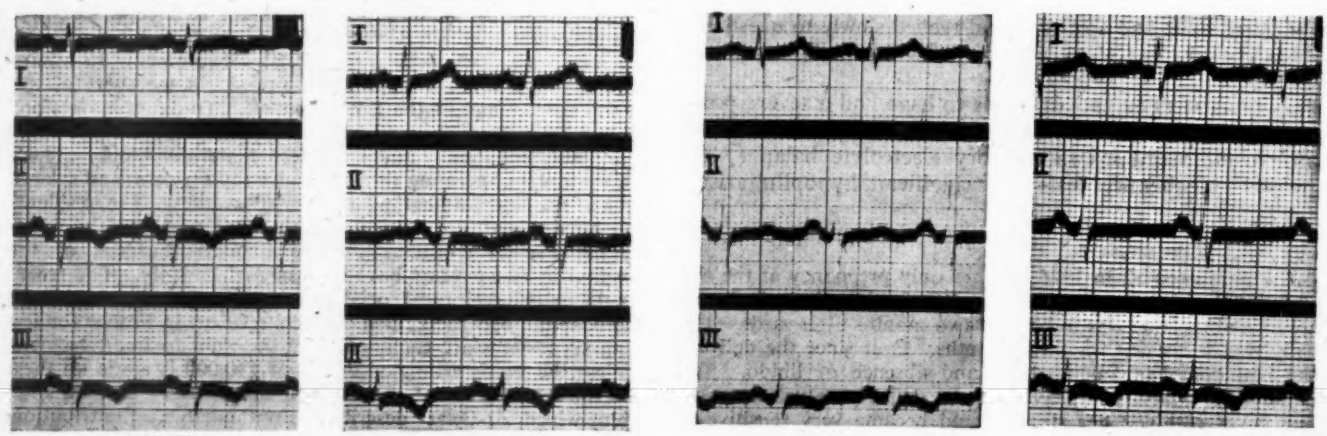

FIG. 1.—Serial electrocardiograms taken during 1945 and 1946.

FIG. 2.—Case 1. Drawing of the heart, showing tumour filling the left auricle and expanding into the ventricle. A groove in the tumour can be seen at the level of the mitral ring.

Case 3

A woman aged 72 was admitted to the West Middlesex Hospital on March 16, 1946, in an advanced cachectic state. There was no previous history of breathlessness, but attacks of palpitation on exertion had limited her activities for some years. Examination revealed widespread pelvic carcinomatosis. Death occurred five days later.

Necropsy. Carcinoma of the Body of the Uterus with Secondary Deposits: Myxoma of the Left Auricle. — The heart weighed 380 g. A firm spherical tumour 5.5 cm. in diameter filled more than three-quarters of the left auricle. It was attached by a short pedicle to the interauricular septum near the foramen ovale and did not occlude any orifice of the auricle. There was a slight increase in the thickness of the right ventricular wall (5–6 mm.), but no other abnormality in the heart and great vessels. A carcinoma of the body of the uterus was present, with numerous secondary deposits in the pelvis and in both lungs.

Histology.—Sections from the auricular tumour were essentially similar to those described in Case 1.

Pathology

Myxomata of the auricles are generally accepted as being true neoplasms which are derived from embryonic mucoid tissue persisting usually in the rim of the foramen ovale (Ribbert, 1924; Yater, 1931). Some writers, however, consider that they are organized thrombi which have undergone myxomatous degeneration (Husten, 1922; Hamilton-Paterson and Castelden, 1942). Whatever their origin, these tumours have a characteristic macroscopic and microscopical appearance, which is described fully by Yater. The three tumours detailed above conform to this description.

Clinical Features

Examination of the 77 recorded cases of myxoma of the left auricle shows that the most common age at death is between 40 and 60 years in both sexes. The range is wide—from 4 years (Jacobsthal, 1900) to 83 years (Curtis, 1872). Females are affected nearly three times more often than males.

The presence of a left auricular myxoma has not been recognized during life, and there is no known characteristic clinical picture. Nevertheless, certain cardiovascular symptoms and signs often occur owing to obstruction of the circulation by the tumour. More than one or two of these effects are seldom found in any one case. These cardiovascular features have been discussed fully by Fawcett and Ward (1939) and Mahaim (1945), and may be summarized as follows:

1. A history usually of less than two years' duration, the chief symptom being breathlessness on effort.

2. Congestive cardiac failure which in spite of every treatment pursues a relentless course to death. This apparently is due to gradual obliteration of the auricle by the growing tumour.

3. An apical diastolic murmur identical with that of mitral stenosis. This is often strikingly variable, and is thought to be due to changing degrees of obstruction of the mitral valve by the tumour.

4. Attacks of acute dyspnoea which are sometimes remarkable in that the patient prefers to lie flat.

5. Attacks of abrupt loss of consciousness usually associated with the assumption of the upright posture. These attacks of syncope and dyspnoea may be accounted for by temporary obstruction to the mitral valve or pulmonary veins by the mobile tumour.

6. An abnormal *x*-ray outline due to enlargement of the left auricle.

7. Embolic phenomena caused by fragments of myxomatous tissue becoming detached from the tumour. If an accessible artery is involved then biopsy of the embolus should establish the diagnosis.

8. Sudden death. This is thought in some cases to be caused by the tumour falling into and completely occluding the mitral valve or pulmonary veins.

In Case 1 the myxoma was evidently the sole cause of the symptoms and subsequent death. This case presented few of the features mentioned above. One striking feature which might have suggested the correct diagnosis was that the patient, while gasping for breath in an unexplained attack of acute pulmonary oedema, refused to be raised to the sitting position. Similar in this respect is the case described by Field *et al.* (1945). Unexpected effects of posture on symptoms are said to be characteristic of mobile intracardiac tumours.

It is difficult to account for the presence in Case 1 of the severe persistent pain in the back of the neck. No explanation for this was found in the brain and meninges at necropsy. It is, however, possible that it was a referred pain of myocardial ischaemia due to the tumour in the auricle and mitral orifice reducing coronary flow. Miller (1942) indicates that referred cardiac pain may occasionally be localized to the back of the neck. A similar pain was described without explanation in the case of Field *et al.* (1945).

In Case 2, although the tumour was large enough to occupy half the auricular cavity, it did not produce any

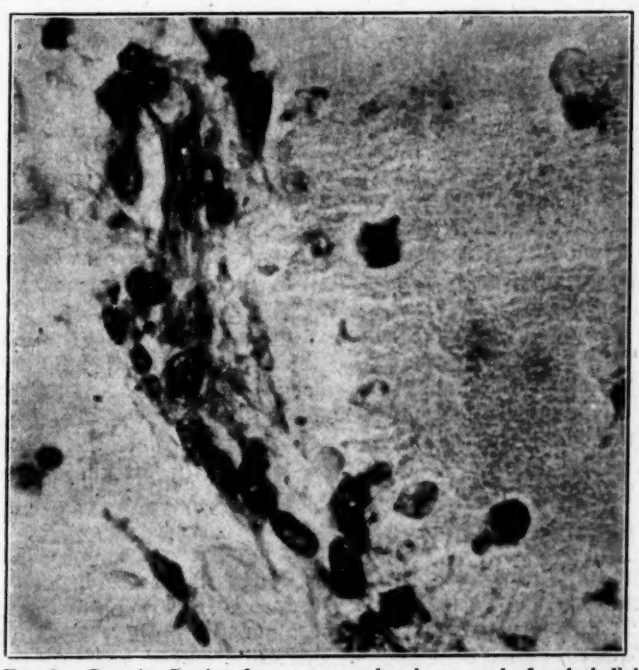

FIG. 3.—Case 1. Section from tumour showing a cord of endothelial cells. Stained with H. and E. (× 500.)

symptoms or signs, nor was it the cause of death. In Case 3 the tumour was even larger than in Case 2, yet, with the possible exception of the attacks of palpitation on effort, there were again no effects on the patient. It thus seems that the auricle is able to accommodate tumours of a large size without any great handicap to the function of the heart.

Electrocardiograms

In cases of left auricular myxoma in which the tumour is large enough to produce chronic obstruction to the circulation, myocardial strain will occur in the left auricle, right ventricle, and right auricle. Certain electrocardiographic changes may thus be expected in theory: the auricular strain may produce P waves of increased height or duration, and the right ventricular strain may result in combined S–T segment depression and T-wave inversion in Lead II and Lead III (Goldberger, 1947).

In a number of reports on cases of myxoma of the left auricle electrocardiograms are described, but in only a few of these are the tracings presented (Houck and Bennett, 1930; Gilchrist and Millar, 1936; Thompson, 1944; Rasmussen, 1945; Field *et al.*, 1945). On examination of these, only the case of Gilchrist and Millar shows abnormal P waves, the voltage being higher than 0.25 mv. Possible S–T segment and T-wave changes are obscured by digitalis therapy in all cases except that of Field *et al.* In their case, although right ventricular hypertrophy was present at necropsy, there is no clear evidence of right ventricular strain in the electrocardiogram.

In Case 1 four electrocardiograms were taken during 1945 and 1946 (Fig. 1). In these it can be seen that the P wave in Lead II is abnormal. It is bifid and prolonged in duration (0.11 sec. to 0.12 sec.) and resembles that which occurs with mitral stenosis. The S–T segment is depressed and the T-wave inverted in Lead III and usually in Lead II. No digitalis therapy complicates the records. It would therefore seem that the electrocardiographic changes indicate combined auricular and right ventricular strain present four years before death. This interpretation is supported by the necropsy findings.

The value of the electrocardiogram as an aid to diagnosis is difficult to assess. However, it is likely that evidence in the tracings of auricular and right ventricular strain without any clear clinical explanation may indicate the presence of a tumour in the left auricle.

Sudden Death

The usual explanation given for sudden death occurring in a case of left-sided auricular myxoma is that the tumour falls into and permanently obstructs the mitral orifice or pulmonary vein openings. In Case 1 there was every appearance at necropsy that the tumour had extended through the mitral valve long before death: there was the marked groove encircling the tumour shaped closely to the mitral ring and also the expansion of the tumour beyond it which had a diameter greater than that of the mitral orifice (Fig. 2). Death in this case was therefore not caused by the tumour suddenly falling into the mitral valve. Further, owing to the fixation of the tumour in the mitral orifice it could not have caused death by falling into the pulmonary vein openings.

In Case 1 and in four other reported cases in which rapid death occurred (Yater, 1931; Clerc *et al.*, 1937; Fawcett and Ward, 1939; Field *et al.*, 1945) it was found at necropsy that the myxoma almost completely filled the auricle concerned, and, further, that recent haemorrhage involved a large part of the tumour. In each of these five cases the heart had been forcing blood through an almost obliterated auricular cavity; it would thus appear that the rapid increase in volume of the tumour due to haemorrhage was the most likely cause of sudden death

Comment

The diagnosis of left auricular myxoma is an extremely difficult problem. If, however, this tumour is suspected clinically, then angiocardiography may possibly confirm the presence of an intra-auricular mass.

The recognition of this condition during life may cease to be of purely academic interest, as surgical removal of the tumour may shortly become practicable. Björk (1948) described the successful use of a cardio-pulmonary machine to perfuse the brain of animals when the blood flow through the heart was stopped for over half an hour. He quoted Crafoord as considering that it should be possible in the future, with the use of such an apparatus, to carry out bloodless intracardiac operations on the human subject.

Summary

Three cases of myxoma of the left auricle are described. One case presented an interesting postural symptom and also an unusual pain which may have been due to myocardial ischaemia. The other two cases were remarkable in that a large tumour was present in each without any obvious cardiac dysfunction.

Abnormalities in the electrocardiogram are considered. It is suggested that graphic evidence of auricular and right ventricular strain, without any clear clinical explanation, may indicate the presence of a tumour in the left auricle.

The causation of sudden death is discussed. It is possible that haemorrhage into the tumour may produce sudden death in some cases.

It is noted that surgical removal of such tumours may become practicable in the near future.

I wish to thank Dr. N. F. Coghill and Mr. J. Scholefield for permission to publish their cases. I am greatly indebted to Professor K. D. Wilkinson for the use of the clinical records and electrocardiograms from Queen Elizabeth Hospital, Birmingham, where the first case was previously under his care. I also wish to thank Dr. A. C. Counsell for his assistance and advice over the pathological specimens, Miss S. Robinson for the drawing of the heart, and Mr. D. A. Vinter for the photomicrograph.

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STILBOESTROL IN OUT-PATIENT TREATMENT OF SEXUAL OFFENDERS

A CASE REPORT

BY

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The following case raises points of theoretical and practical interest.

Case Report

A man aged 33 had locked himself in a first-floor room of his parents' house for the past 15 years, and he had barricaded the door of his room for the past two years. He used a ladder, which he built, to enter and leave his room through the window. All his food was put into a basket, which he pulled up through his window with the help of a rope. With the exception of a few months at the beginning of this period he had not done any work since his nineteenth year. Although he left his room sometimes, he was afraid of going out or mixing with people, especially with members of the other sex.

Our first impression was that of a man who was excessively shy, who looked away—never straight into one's eyes—and who appeared to be much younger than his real age. He gave the picture of a schizoid living an idle life, dreamy, lacking attention and concentration. He was hesitant in answering questions, but his answers were intelligent and to the point, and there was no obvious sign of delusions or hallucinations. He is, however, aware that people talk about him and make fun of him.

Psychiatric Social Worker's Report

Information on the patient was given by his mother, a small tired-looking woman aged 62 who has a great sense of humour. She is even-tempered, tries to be cheerful, is hard-working, and at present is employed as a factory cleaner. She was in a mental hospital three months after her second son's birth. Her maternal grandfather was a drunkard. The father is a skilled labourer, aged 60, given to gambling, but relying on his wife to cope with difficulties. The patient had a brother two years and a sister four years younger than himself. The brother was invalided from the R.A.F. about 1944, diagnosed "psychoneurotic."

During the patient's life the family had lived at seven different addresses. For the past five years they have occupied a two-story house on an unmade road on the outskirts of a small town. It is ill kept and overcrowded, housing also the patient's brother and the latter's wife and child.

Personal History.—He had been breast-fed and weaned early. As a child he was precocious, and walked and talked before his second year. His mother stimulated him to learn and showed him off to neighbours. He played with other children, especially a little girl next door. When he was 4 or 5 his mother saw this girl leave the chicken-house with her knickers under her arm, followed by the patient. She was very shocked, and scolded him into a state of contrition. There was a similar incident later. Being shy, he was rather afraid of going to school. At elementary school he seemed to be happy and eventually well adjusted to his fellows. When he went to a secondary school (on a scholarship) he was unhappy. The level of his work varied from high to low, and he would try to evade school by pleas of ill-health when nothing was wrong with him. Worried by this, his mother went to seek the advice of the headmaster, who went to the class-room, called the patient up, and publicly told him how naughty he was. The patient thereafter hated school more than ever. Soon the family moved to a home far from any secondary school. The patient then attended an elementary school again, leaving at the age of 14. For one year he worked with a market gardener, and three years as electrician's mate with a sarcastic artisan who "had no time" for the patient's shyness. He had done no work since his nineteenth year. He did not go out with girls, though he admired them from afar, and would speak to his sister's girl friends. His health was good.

Personality.—He was very shy and retiring, and had had few friends before he was 18. He never got on well with his siblings, but tried to boss them. He did not get on well with his father either, and could not bear his mother. He was kind to animals, had always been very clean and tidy, and whatever he did he did extremely well. He tried to do things to perfection, but did not stick to it. His interests were mainly reading and politics, and it seemed that he was inclined to favour Fascism.

History of Mental Illness.—When the patient gave up work at 18 he became more and more retiring. He decided to have his meals in his room, and locked the door so that nobody could get in. He made contraptions to find out if his mother did go into the room in his absence. Later on he barricaded the room completely and entered it by a ladder through the window. His meals had to be put into a basket, which he dropped through the window and pulled up. He knocked at the door from the inside when he wanted to speak to his mother, and communicated with her through the door. During the war he sided with Hitler. Twice when his mother reproved him he hit her violently. The patient seemed to have attended a London psychotherapeutic clinic before 1939, and to have made a brief stay in the local mental hospital as a voluntary patient.

Difficulties of Treatment

After a few sessions the patient admitted that his inability to mix was covered by the strong obsessional compulsive feeling to rape women. He had been in the mental hospital for a week, but had run away and refused any form of in-patient treatment. Psycho-analytical treatment produced no result: he had difficulty in attending for out-patient treatment, and social psychotherapy was out of the question, as female company aroused his compulsive ideas of rape with an affective tension too strong for him to endure. Moreover, the danger of his actually committing rape was felt to be an acute problem. Taking into consideration this possibility, along with the psychotic symptoms, the great social burden the patient provided, and the difficulties in the way of effective treatment, another physician called in the duly authorized officer with a view to certification. After discussion this step was not taken because grounds for it were not unassailable and because the patient might have reacted with irrevocable deterioration. In this dilemma it was decided to use stilboestrol. We hoped that the patient might lose the raping obsession if the drug eliminated his sex feelings; there might then be an interval free from the worst tension in which we could initiate his re-socialization and a better psychological adaptation.

Treatment and Progress

The talk of certification had made the patient realize that the *status quo* was menaced and had aroused his interest in the idea of treatment. He was seen once a week, and stilboestrol treatment (5 mg. thrice daily) was started on October 28, 1948.

He continued with this regularly up to December 13. His interest in girls and his compulsive feelings weakened, and on December 9 he was induced, after a lot of encouragement, to go to London to attend a therapeutic social club. He would not go in by himself, but waited till his doctor arrived, when he hid himself in a corner and did not take part in any activity. We did not persuade him to do so, but introduced him to one or two people.

On December 13 he received phenobarbitone from another doctor by mistake, and took it believing it to be his usual tablets.

On December 22 he reported a return of his feelings of tension and compulsion. From that day until December 17, 1949.

he took altogether only sixteen 5-mg. tablets of stilboestrol —and none since. He continued to attend one or two social clubs from December 9, 1948, with one or two short spells of relapse.

Since February 17, 1949, his inability to mix, especially with the opposite sex, his feelings of tension in the company of girls, and his compulsion to rape them have completely disappeared. He mixes freely in the club with both sexes and takes an active part in the club activities. He now enters the house in the normal way.

Psychopathology

The patient was a placid self-contained (in the words of his mother, a "marvellous") baby who provided no difficulty. He was extremely intelligent—"as advanced at 18 months as his cousin at 5 years." He was good-looking and admired by everybody, but at the same time so sensitive that he was unable to stand criticism.

He was twice severely reprimanded by his mother before he was 5 years old—in both cases in connexion with girls. He was always sensitive to his parents' low economic and social standard. His strong desire to over-compensate was best expressed in his own words: "I wanted to do something spectacular to impress the women, I suppose." His hatred towards one of his male teachers is pathological, mainly because he was caned in front of girls between the ages of 7 and 11 years. "It was an unbearable blow to my pride to be caned before my adored ones—one in particular being, as I then thought, perfectly lovely, and she must have witnessed my shame."

Although he got his scholarship, topping 200 boys and girls, he soon afterwards dropped to 28th in a class of 31 boys; yet at that time he was top of his class in geography, possibly because the mistress who taught this subject was a pretty girl of 18.

Discussion

Dunn, using oral stilboestrol, has caused the disappearance of the hypersexual state and a total lack of sexual impulse in a male sexual criminal aged 27, and in a precociously developed boy aged 12 : 375 and 565 mg. of stilboestrol, respectively (in the main 5 mg. daily), produced moderate and advanced degenerative changes in the seminiferous tubules (resulting in a temporary sterility) in the human testicle. Discontinuance of stilboestrol therapy for 9 to 16 weeks resulted in regenerative reaction of the degenerated seminiferous tubules and reappearance of sexual impulses at a subnormal level. In view of the serious social problem involved in these cases, stilboestrol therapy was resumed as a precautionary measure when the patients showed interest in sexual matters and the associated restlessness and activation of the hypersexual state. In these experiments the abnormal sex impulse, the interest exhibited in sex matters, or the associated restlessness and hypersexual state reappeared a short time after the administration of stilboestrol was discontinued. Stilboestrol therapy may be maintained until from 300 to 400 mg. has been administered.

In our case the sexual desire and interest reappeared too, but the attached pathological mental symptom—the compulsion to rape women—did not reappear, and his complete inability to mix with members of the other sex disappeared entirely.

Summary and Conclusion

A case of a 33-year-old schizoid is described. He had locked himself away and not worked for 15 years.

It was found that his reason was that he did not want to give in to a strong compulsion to rape women and children.

After the failure of some other forms of treatment stilboestrol was given, with the result that this compulsion disappeared.

Resocialization through therapeutic social clubs was then possible.

This patient has regained his ability to mix with both sexes after 15 years of seclusion.

Nothing can be concluded from the treatment of one case. However, it is reported to encourage others to experiment with the use of stilboestrol in the out-patient treatment of potential and actual sexual offenders as an adjunct to various methods of psychotherapy and re-socialization.

Our thanks are due to Dr. R. Ström-Olsen, Physician Superintendent of Runwell Hospital, for his help and co-operation, and to Miss M. C. Fanta, Psychiatric Social Worker, for the case report.

EARLY RISING FOR PUERPERAL WOMEN

BY

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From time immemorial it has been considered desirable among civilized races for recently delivered women to remain in bed for periods varying from 10 to 28 days. This old regime certainly has the merit of enforcing rest in the puerperium, and has strong advocates in Jardine (1910), Berry Hart (1912), and Peel (1947). An effort to strike the balance between complete rest in bed and early rising has been made by Balfour Marshall (1912) and Shaw (1947), who consider that exercises and movement in bed should be encouraged.

The advantages, both physical and psychological, of early rising are, however, such that this method is displacing the older methods of treating the puerperal woman. The present position is well reviewed by Pocock and Kark (1947) and in a leading article in the *British Medical Journal* (1948). In this country de Soldenhoff (1948) reported favourably upon a series of women allowed to rise from the third day of the puerperium. He failed to follow up his cases in the post-natal period, however, and it is mainly to fill in this gap in our knowledge that the present study, based on one year's experience, is presented.

Material

The women studied were those who normally receive in-patient treatment at University College Hospital. Owing to the shortage of accommodation selection was essential, preference being given to women with a history of difficult labour or caesarean section, women with gross obstetric or medical abnormality, normal primigravidae, those with parity greater than four, and complicated labour cases admitted as emergencies.

Within these groups the women comprised a representative cross-section of the child-bearing population. Ages varied from 15 to 44 years and parity from 0 to 17. Many nationalities and races were represented. The majority of the women came from the Registrar-General's categories II, III, and IV, and had attended the antenatal clinic at this hospital, although a few had attended L.C.C. clinics outside.

After delivery the women were unselectively distributed between two wards, C1 and C2. Complicated cases (some of which are discussed briefly), in addition to the "normal" series in this paper, were nursed on Ward E.

Ward C1.—The women in this ward were permitted early rising. The regime was as follows:

1st day: The mother sits up and swings her legs over the edge of the bed for about five minutes, morning and evening.

2nd day: As above, but gets out of bed and stands for about three minutes.

3rd day: She walks round the bed once or twice. Sits in a chair to feed the infant.

4th day: As 3rd day, but she walks to toilet whenever necessary.

5th day: As 4th day, but she is up for longer periods.

8th day: Non-absorbable sutures, if any, removed.

10th day: Discharged.

Ward C2 (Control).—In this ward, the mirror image of C1 and nursed by the same staff, the women were kept in bed until the eighth day and then allowed up for toilet, feeding the infant, and the evening meal.

The grouping of the mothers in these wards was as follows:

	Ward C1	Ward C2	Total
Primiparae	197	171	368
Multiparae	104	116	220
Caesarean sections	18	—	18
Totals	319	287	606

Ward E contained 222 cases which were unsuitable for C1 or C2. They were "potentially infected" cases that had undergone forceps delivery or had severe perineal tears. All who were well enough were permitted early rising of the C1 regime, or this was modified to suit the individual patient. Medically unfit patients, such as those with heart disease, diabetes, toxaemia of pregnancy, anaemia, etc., were treated separately in another ward and are not considered in this paper. Five of these women were delivered by caesarean section.

Observations Recorded

The following points were specially noted in the immediate post-natal period: (1) general infection, (2) genital infection, (3) urinary infection, (4) subinvolution, (5) incidence of thrombosis, (6) cracked nipple, (7) non-suppurative mastitis, (8) breast-feeding (established, complemented, or failed), and (9) general condition on discharge.

At the post-natal examination six weeks after delivery the following observations were recorded in each case: (1) anaemia, (2) breast-feeding (maintained, complemented, or failed), (3) abdominal pain, (4) backache, (5) bladder symptoms (stress incontinence), (6) raised blood pressure, (7) vaginal discharge, (8) lax abdominal muscles, (9) cystocele, (10) deficient perineum, (11) laceration of cervix, (12) cautery of cervix for erosion, (13) position of the uterus (anteverted or retroverted), and (14) tenderness of the appendages.

Results

The numbers of cases under each of the above points of observation were recorded for the "early rising" and "control" groups, and these were statistically analysed to demonstrate any significant difference between them.

In the period immediately following delivery, while the women remained in hospital, no statistical difference between the groups was recorded under any of the heads noted. At the remote post-natal examination, however, it was found that among primiparae there were significant differences under "lax abdominal muscles," "laceration of the cervix," "pain," and "vaginal discharge," while among multiparae they occurred under "lax abdominal muscles" and "laceration of the cervix." These differences seemed to be against early rising, but on further examination it was found that in the C1 group of primigravidae 55 cases of lacerated cervix were recorded—almost four times the incidence in the C2 group. This laceration is obviously the result of labour and cannot be attributed to early rising, and explains the raised incidence of pain and vaginal discharge in this group. Under none of the other heads was a significant difference recorded. The majority of the multiparous women were nursed in C1 ward, and they raised the incidence of "lax" muscles in this subgroup.

Though the figures were not significant, there was a slightly higher incidence of mastitis in the "control" group, but these women had a somewhat lower incidence of urinary infection.

In the C wards, one early and two late risers suffered from a superficial thrombophlebitis. All these women had experienced trouble with varicose veins during pregnancy. No case of deep femoral thrombosis occurred in the C wards but there was one in E ward.

In the present series one mother in C1 died within 36 hours of delivery following sudden collapse. Necropsy revealed the presence of uterine sepsis and bilateral tuberculous disease of the suprarenal bodies.

In E ward, as might be expected from the nature of the cases admitted, the incidence of puerperal morbidity and infection was higher. In the remote post-natal period, however, this group was not significantly different from those in C wards.

Discussion

This study presents the observations upon 828 women in the puerperium, of whom 23 underwent caesarean section. Of the remaining 805 who underwent vaginal delivery, 588 "clean" cases were admitted to the C wards, while 217 "potentially infected" cases were nursed in E ward. Only seven mothers in E ward were unfit for early rising.

The observations show that early rising seems to have no deleterious effects upon the women, those numerous differences which appear significant being partly explained by the accidental distribution to the wards after delivery. No difference was found between the remote complications, such as prolapse and retroversion. It is fully realized that observation over many years would be necessary to study the effects of early rising on prolapse. However, so many factors influence prolapse that correct control would be almost impossible. Early rising entails no risk to the recently delivered woman.

In favour of early rising, moreover, is the reaction of the woman herself. She feels fitter, has less trouble with defaecation and urination when the bedpan is not necessary, and undergoes less puerperal depression. The nursing staff also feels that the regime is more satisfactory and tends towards the psychological well-being of the puerperal mother.

Finally, it is stressed that early rising is not suitable in domiciliary practice, where once the woman is ambulant the urge to meet her domestic obligations is irresistible. Nor is it to be used as a means of increasing hospital turnover by discharging the women earlier than hitherto. For a multiplicity of reasons it is still considered essential to keep the recently delivered woman in hospital for a minimum of ten days, whereby she derives the benefit of rest combined with the advantages of early rising.

I am indebted to Professor W. C. W. Nixon, Director of the Obstetric Unit, University College Hospital, for granting the facilities to carry out the investigation and for much helpful advice in preparing this paper. My thanks are due to Miss E. M. C. Edwards, Sister of C wards, for her willing help and interest, and to Mrs. M. Merrington and Mr. C. E. Wrigley, of the Department of Statistics, University College, London, for the statistical work and advice.

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TWO SUCCESSFUL POST-MORTEM CAESAREAN SECTIONS FOLLOWING SPINAL ANALGESIA

BY

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The following two cases of maternal death after spinal analgesia present three points of interest. Two live babies were delivered by classical caesarean section performed some four minutes after maternal death, during which time every possible effort was made to resuscitate the mothers. Both patients were exhausted, and suffered from malnutrition and some degree of anaemia. In each case our intention was to perform caesarean section in order to terminate imminent obstructed labour. In both cases death followed immediately on the administration of 2 ml. of amylocaine hydrochloride ("stovaine") and before the operation had begun.

Case 1

A primipara, aged 28, who had not attended the antenatal clinic, was admitted on July 1, 1949, at term. She had been in labour for 20 hours, with the membranes ruptured for 15½ hours, and was now having strong frequent contractions.

Her general condition seemed good, but there was evidence of malnutrition and anaemia. The temperature was 98.4° F. (36.9° C.), the pulse 100, the respirations 20, and the blood pressure 100/64 mm. Hg. Abdominal examination revealed that the position of the foetus was right occipito-anterior, with the head overlapping the symphysis pubis. The foetal heart rate was 144. On vaginal examination the cervix was found to be two fingerbreadths, and the pelvis generally contracted with a promontory projecting acutely forward.

In view of the findings of marked disproportion, we decided to perform a lower-segment caesarean section. Atropine, 1/100 gr. (0.65 mg.), was given as premedication. One hour later, ephedrine, ½ gr. (50 mg.) intramuscularly, was followed by 2 ml. of amylocaine intrathecally. About ten seconds later she began to gasp violently. Breathing ceased about 45 seconds after administering the analgesic, but the pulse continued for a few seconds longer. During this time ephedrine, ½ gr., was repeated, followed by 8 min. (0.5 ml.) of adrenaline hydrochloride (1 in 1,000), an intracardiac injection of nikethamide, 1 ml., and also anal stimulation. Despite these measures and artificial respiration there was no response. The abdomen was rapidly opened and cardiac massage from below the diaphragm attempted without effect. A classical caesarean section was performed and a live baby, weighing 7 lb. (3.2 kg.), was delivered some four minutes after the mother's death.

Case 2

A primipara, aged 22, who had not attended the antenatal clinic was admitted on September 27, 1949, at term, having been in labour for 16 hours, and with the membranes ruptured for six hours.

On examination her general condition suggested nutritional deficiency. The temperature was 99° F. (37.2° C.), the pulse 120, the respirations 24, and the blood pressure 102/64 mm. Hg. Abdominal examination revealed that the bladder was distended, the position of the foetus was left occipito-anterior, the head engaged, and the foetal heart rate 148.

Per rectum, the head was felt low mid-cavity with a marked caput, and the cervix, which was three fingerbreadths dilated, was very oedematous and tight. Per vaginam, the rectal findings were confirmed, and it was found that the pelvic outlet was markedly contracted, the subpubic angle being about 75 degrees, and the outlet transverse 3 in. (7.6 cm.) The head could not be displaced for catheterization. It was decided to perform a lower-segment caesarean section.

After the usual precautions, amylocaine, 2 ml., was given intrathecally, and the patient collapsed immediately. The same resuscitation procedure was carried out as for Case 1, with the exception of cardiac massage, but there was no response.

A classical caesarean section was immediately performed; an asphyxiated male baby, weighing 6 lb. (2.7 kg.), was delivered the baby responding to treatment.

Discussion

It is not our purpose to discuss the advantages and disadvantages of spinal analgesia for caesarean section. The deliberations at the meeting of the Section of Obstetrics and Gynaecology of the Royal Society of Medicine in March, 1947, revealed how divided were the views of leading authorities. Bourne and Williams (1948) are eloquent in their summing-up of the present situation, and conclude: "There is, we fear, in this country, a considerable number of young healthy pregnant women who stand condemned to death by spinal anaesthesia for caesarean section."

When we took up our present appointments a year ago we were of open mind, because one of us (A. H. C. W.) had performed 179 caesarean sections at the Postgraduate Medical School of London without mortality, using spinal analgesia in some ten cases, but we have been obliged by circumstance to use it here. We personally have used the method for 168 major gynaecological cases here without any death attributable to it.

These two recorded catastrophes were among our first 12 caesarean sections under spinal analgesia. We are tempted, therefore, to assume that the risks are peculiar to the pregnant woman, and especially to the West African parturient, whose average blood pressure, like that of her Indian counterpart (Napier, 1946) is lower, with the result that the margin of safety is less should a fall in blood pressure occur as a result of the spinal analgesic. Moreover, West Africans here are often admitted late in labour in an exhausted condition and suffering from malnutrition and anaemia, which it may be impossible to counteract in a short space of time.

Since these two catastrophes we have been able to avoid spinal analgesia, and we have performed a further 17 caesarean sections without mortality, using open ether.

Summary

Descriptions are given of two cases of maternal death after spinal analgesia, in which live babies were delivered by post-mortem caesarean section. Reasons are suggested for the deaths of these two women, who were both West African natives. Spinal analgesia was afterwards avoided, and no further trouble was encountered in 17 cases of caesarean section.

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Medical Memoranda

A Case of Pulmonary Asbestosis

Asbestosis is a form of silicosis, the asbestos fibres consisting mainly of a fibrous magnesium and calcium silicate. These fibres are found in the fine dust present in factories engaged in the manufacture of heat-resisting materials, etc., from crude mineral asbestos.

The lesions produced in the lungs by the inhalation of asbestos fibres take the form of a diffuse pulmonary fibrosis affecting particularly the lower lobes of the lungs. The characteristic "asbestos bodies" may be found in the sputum, but it is only when they are present in clumps or masses that they indicate parenchymal involvement (Beattie and Dickson, 1943). Emphysema and bronchiectasis are commonly present; the pleura is thickened and may be adherent to the diaphragm. Pulmonary tuberculosis may be associated with asbestosis, although not so commonly as with silicosis.

The following case is of interest in view of the lapse of time between exposure to industrial hazard and the diagnosis of the disease, and because of the isolation of "asbestos bodies" in the sputum 20 years after exposure.

CASE REPORT

The patient, a man aged 45, was admitted to a sanatorium on April 4, 1949, with a diagnosis of pulmonary tuberculosis following a mass miniature radiography examination in September, 1948. He gave a history of chronic productive cough of at least ten years' duration accompanied by breathlessness on exertion for approximately the same period. The sputum was white and frothy and has never been blood-stained. Although spare in build his weight has remained stationary at about 8 st. 12 lb. (56.25 kg.). There have been no fresh symptoms during the last few years.

At the age of 12 he had a colectomy performed for rheumatoid arthritis, and has limited movement of the spine, hips, and elbow-joints. He has been in the habit of taking liquid paraffin daily for 35 years.

Occupational History.—From 1924 to 1929 the patient worked as an asbestos crusher. The crude dry mineral asbestos was crushed by mechanical hammers into its constituent fibres, which passed into hoppers and thence into sacks. During this process the air was continuously filled with dry asbestos which entered the workpeople's mouths and noses in spite of the simple precautions they took. Respirators were not provided, so the men were in the habit of tying their pocket-handkerchiefs over their mouths and noses while working. The patient worked in an atmosphere such as this for 48 hours weekly. He gave up this employment in 1929 and has not worked with asbestos since.

On examination he was seen to be of spare build and poorly nourished. His pulse, temperature, and respirations were within normal limits. The chest was emphysematous, with an expansion of only 1¾ in. (4.4 cm.). Vital capacity was 2,300 c.cm. The percussion note was not impaired. A few moist sounds were present at both bases. There was no cyanosis or clubbing. Repeated examination of the sputum and stomach washings both by culture and by animal inoculation was negative for tubercle bacilli.

Asbestos bodies were found in the sputum on April 12. Oil droplets were never demonstrated. An *x*-ray film taken on April 7 showed a fine diffuse infiltration affecting mainly the mid-zone and lower zone of the right lung. There was some very fine scattered infiltration in the left mid-zone. The apices were clear, the bases emphysematous, and the right costophrenic and cardiophrenic angles were obliterated. There was considerable increase in the size and density of both hilar shadows. Screen examination showed little interference with the movements of the diaphragm, although there was some peaking of the right cupola on inspiration.

The case was referred to the Pneumoconiosis Medical Panel as a matter of interest, but as the man had not worked in the asbestos industry for 20 years he was adjudged ineligible to recover compensation under any existing scheme.

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E. W. STREET, M.R.C.S., L.R.C.P

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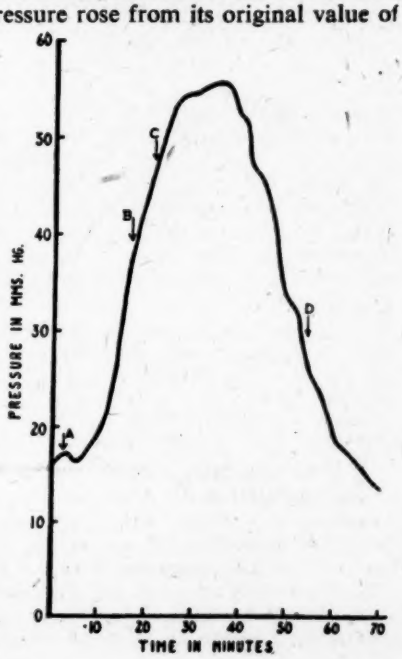
Effects of Nitrogen Mustard on the Intraocular Pressure

Nitrogen mustard is an unstable vesicant studied during the war as a possible successor to ordinary mustard gas. When dissolved in water it forms mainly a hydrochloride (S-hydrochloride), which is stable for long periods. It is this product that has been used in the present study. When applied to the eye of the rabbit (for example, two drops of a 1% solution) its most prominent effect is a breakdown of the barrier between the blood and aqueous humour, so that plasma proteins appear in the latter fluid (Davson and Quilliam, 1947); associated with this change there is a pronounced meiosis, a severe inflammatory conjunctivitis with chemosis, and corneal oedema. So far, no study of its effects on the intraocular pressure have been recorded. The results described below show that the effects may be very severe; they will be published in detail later, it being our purpose here mainly to emphasize the severe consequences that are likely to ensue should a little of this material accidentally reach the eye—a matter of some importance in view of the use of the substance in the treatment of Hodgkin's disease.

EXPERIMENT

A rabbit was anaesthetized with pentobarbitone sodium, and after cocainization of the right eye a needle was inserted into the anterior chamber, connected to a tambour-type manometer, and the intraocular pressure recorded. Slit-lamp observation of the aqueous humour was made at the same time. The changes in intraocular pressure with time are shown in the Graph. At A three drops of nitrogen mustard were placed in the conjunctival sac; it will be seen that the intraocular pressure rose from its original value of 16 mm. Hg. to one of 55 mm. Hg. within about 25 minutes—that is, the changes so far as intraocular pressure is concerned are akin to those occurring in an acute inflammatory attack of glaucoma. The constricted pupil, however, and the breakdown of the blood–aqueous barrier are reminiscent of an acute iridocyclitis.



In general, the constriction of the pupil runs parallel with changes in intraocular pressure, the maximum constric-

tion occurring during the later stages of the rising phase. The appearance of a noticeable "aqueous flare"—that is, the presence of protein in the aqueous humour—seemed to take place after the pressure had begun to rise steeply. Thus at B the flare was first definitely identified; at C the current of cells in the aqueous humour ceased, indicating an increase in viscosity due to the presence of protein; at D the flare appeared to be maximal and clots of fibrin were observable.

In conclusion, we must emphasize that nitrogen mustard is a dangerous substance; there is reason to believe that the human eye is some five times more sensitive to its effects than the rabbit's eye, so that just a fraction of a milligram of nitrogen mustard in the conjunctival sac may be enough to cause symptoms as acute as those described here. There is no known antidote for the substance, so that the first measure to be taken is thorough and immediate irrigation of the eye with water or saline solution.

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Congenital Atresia of the Oesophagus

In 1944 Haight, in America, reported the first case of congenital atresia of the oesophagus successfully treated by anastomosis. Franklin (1947) described the first two successful cases treated in this country, and since then there have been several, as yet unpublished, successes. In reporting another successful case it is my purpose to describe certain variations in operative technique and post-operative management which are considered of value.

CASE REPORT

A full-term female child weighing 8¼ lb. (3.85 kg.) was admitted to the Alder Hey Children's Hospital on May 5, 1949, when 5 days old, with a history of regurgitation of all feeds since birth, associated with coughing, choking, and cyanosis. In spite of the length of history the child's general condition was satisfactory on admission apart from moderate dehydration. A small rubber catheter was passed into the oesophagus and 1 ml. of iodized oil was injected through this tube. Radiographs showed a dilated blind pouch ending at the level of the third thoracic vertebra. There was air in the stomach.

The child was nursed in an oxygen tent and the pharynx aspirated at frequent intervals. Penicillin, 250,000 units, was given intramuscularly and an intravenous glucose-saline infusion was started.

Operation.—Endotracheal oxygen and ether was supplemented by curare (Dr. G. J. Rees). The child was placed on her left side with a small sandbag underneath the lower ribs and her right arm raised above her head. An incision was made along the fourth intercostal space from the lateral border of the sacrospinalis to the anterior axillary line. The intercostal muscles were divided down to the parietal pleura and the pleura was gradually dissected off the chest wall. The ribs were slowly spread with the aid of a mastoid retractor, while the pleura was separated in an upwards and backwards direction. At the apex of the lungs some difficulty was experienced in dissecting the pleura of the chest wall and a large hole was torn into the pleural cavity. This gave rise to some temporary respiratory distress, which was, however, quickly overcome by occluding the hole with a moist piece of lint and by controlled respiration. The blind oesophageal pouch was easily identified by manipulating a catheter in it. After dividing the vena azygos the lower oesophageal segment was discovered. It was found to be attached to the back of the trachea just above its bifurcation, and the distal segment was divided. The upper and lower segments could be brought together without tension. The blind oesophageal pouch was opened. The two segments were now anastomosed by means of a single layer of about a dozen interrupted silk sutures, on atraumatic needles, around a thin rubber catheter which had been passed down into the stomach and up into the mouth. The wound was dusted with penicillin powder and closed in layers around a small drainage-tube lying in the extrapleural space. The operation was completed in 85 minutes.

Post-operative Management.—The child was returned to an oxygen test, intravenous fluids were continued, and penicillin was given orally and by intramuscular injection. Her position was often changed and the pharynx was aspirated at half-hourly intervals. The tube draining the extrapleural space was connected to a Woulfe's bottle.

On May 6 her condition was excellent. Small feeds of ½ oz. (14 ml.) glucose-saline were given through the stomach catheter. In the afternoon the infant vomited up the catheter and it was not reinserted. Next day the drip stopped early in the morning and was taken down. Oral feeding was instituted. At first a feed of ½ oz. of saline coloured with gentian violet was given. There was no discharge from the drainage-tube. Then ½ oz. of breast milk was given at two-hourly intervals and the volume of the feeds was gradually increased.

On May 8 the child was taking 2½ oz. (71 ml.) of breast milk at three-hourly intervals without difficulty. No vomiting occurred and there was no discharge from the drainage-tube. On May 10 penicillin was discontinued and the drainage-tube removed. On May 13 the sutures were removed and the wound had healed.

The child made an uninterrupted recovery and was discharged on the 40th post-operative day. At the time of writing she is 11 weeks old and weighs 12 lb. (5.4 kg.).

COMMENT

The operative approach differs from that of Haight (1944), Ladd and Swenson (1947), Franklin (1947), Swenson (1947) and others, and is the one used by Mr. Denis Browne. It provides an excellent exposure of the upper mediastinum and avoids time-consuming rib-resection. It involves, however, a more extensive separation of the parietal pleura from the chest wall and there is some danger of post-operative pulmonary collapse of the upper lobe. A rent of the parietal pleura may occur and give rise to temporary respiratory embarrassment, but this can be checked by controlled respiration anaesthesia and it seems unnecessary and time-consuming to repair it.

It had been our intention to give feeds by stomach-tube for at least five days, but the tube was regurgitated on the day after operation and it was thought inadvisable to reinsert it. Feeding by mouth was started 36 hours after operation, at first using coloured saline to detect any leak from the anastomosis, and then breast milk. We consider that the early commencement of oral feeding was one of the main reasons for the child's speedy recovery. Detection of a leaky anastomosis by instillation of iodized oil into the child's oesophagus and observing it under *x* ray was not undertaken because it was thought that this method would not reveal a small leak and that a coloured aqueous solution would prove more satisfactory and less irritant.

I wish to thank Miss Isabella Forshall for her most helpful advice during both the operation and the post-operative treatment, and Dr. R. McL. Todd and Dr. A. C. Kirby, whose skilled co-operation during the post-operative period has been invaluable. The rapidity and smoothness of the child's recovery were largely due to Dr. W. J Gourley's and Sister Owen's constant and faithful attention.

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A Case of Tylosis

Hyperkeratotic plaques on the palms and soles of congenital and familial origin have been variously described as tylosis, ichthyosis palmaris et plantaris, and keratoma palmare et plantaris hereditarium (Unna, 1883, Besnier, 1889).

CASE REPORT

A female child, aged 5 years, was brought to the hospital for treatment of the horny growths on her toes, heels, finger-nails, and palms. At birth the nails were more or less affected. These protuberances had been scraped now and then without the patient feeling any pain; they invariably recurred. When she was 8 months old, a similar horny growth appeared on the right big toe. Gradually it grew larger, and the heels were affected next. One of the growths was removed, and microscopical examination revealed a simple hyperkeratosis. There were several growths on both soles, but the arch of each foot was unaffected. The accompanying photograph gives a fair picture of the condition.

Family History.—Her mother's first pregnancy ended in abortion. There is a sister 3 years old and a brother 8 months old. Both are quite healthy without any cutaneous manifestations like those in the patient. There is no history of the parents or of other members of the family having suffered from warty growths of this kind.

There is no history of arsenic medication. The child is normally developed, though the scalp hair is rather scanty and the lower central incisors have erupted prematurely and are irregularly set.

Treatment.—Since the Wassermann reaction was found positive, a full course of bismuth and arsenic was given without any improvement in the warty condition. Subsequently the W.R. became persistently negative. To improve the general health the child was put on a well-balanced diet, supplemented with iron, calcium, and vitamins.

The growths were removed by surgical dissection as completely as possible, and a course of deep *x*-ray treatment was given; recurrence followed. As a palliative measure scraping of the growth was undertaken after softening the part with 10% potassium hydroxide and applying salicylic acid ointment of strengths varying up to 20%.

DISCUSSION

This case falls into the age group mentioned by Roxburgh (1947). The symmetrical character of the lesions, absence of inflammatory changes, and the history of its existence from birth are consistent with the findings in the case recorded by Vilvandre (1918). There is no doubt that this is a case of tylosis in its aberrant form. So far as I know no similar case has previously been reported in India.

I am indebted to Dr. T. N. Banerjee for help with the diagnosis and treatment of the case. My thanks are also due to Dr. D. P. Misra, Dr. A. K. Dutta, and Captain J. N. Sinha.

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A Case of Paget's Disease Involving the Maxillae

The following unusual case is interesting enough to be placed on record.

CASE REPORT

A married woman aged 76 was admitted to hospital after a fall and was unable to move her right arm. Thirty years previously she had had her teeth extracted, and soon after the extraction her face had begun to swell. She had been wearing artificial teeth until ten years ago.

On examination there was a haematoma around a laceration of the scalp. Movement of the right shoulder was painful and limited. She was deaf and almost blind, and had a deep, male type of voice. Her upper jaw was prominent and irregular (Fig. 1). There was overgrowth in size and contour of the alveolar ridges. Her blood pressure was 200/100. A systolic murmur was heard all over the chest. A radiograph of the skull (Fig. 2) revealed typical "cotton-wool" appearance. The maxillae were involved, but not the mandible. Both femora and pelvis showed radiological changes of Paget's disease.

FIG. 1.—Side view showing the prominent upper jaw, enlarged veins, and normal lower jaw.

The patient was transferred to St. Francis Hospital, and she died there in July, 1949.

FIG. 2.—Radiograph of skull showing typical "cotton-wool" appearance of Paget's disease involving the maxillae. The mandible is not involved.

COMMENT

Paget's disease occurs in two forms: (1) localized, in which the clinical changes are limited to one bone — for example, the tibia— and (2) generalized, in which more than one bone is involved.

Da Costa (1921) has stated that the face is seldom affected below the level of the supraorbital margins. The above case shows that the maxillae are also involved. An interesting feature of this case is that the mandible appears quite normal on the radiograph (Fig. 2). Paget's disease involving the facial bones has been extensively reviewed by Novak and Burket (1944).

I wish to thank Dr. O. W. Roberts for permission to publish this case.

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Reviews

STREPTOMYCIN

Streptomycin. Nature and Practical Applications. Edited by Selman A. Waksman, Ph.D. (Pp. 618. 95 figures. £3 16s. 6d.) London: Ballière, Tindall and Cox. 1949.

Waksman himself contributes only two introductory chapters to this book; the remainder is the work of no fewer than 57 authors. It is divided into three parts, the first on the source, production, chemistry, and assay of streptomycin, the second on the laboratory study of its action, and the third and longest on its clinical uses. There is a small final section on miscellaneous uses, which include the isolation of viruses, the treatment of animal and plant diseases, and the preservation of bovine semen.

The list of authors includes many distinguished names, all American, and their contributions have the authority of exceptional experience. Those in the first two parts are uniformly good, but the clinical section is uneven, partly, perhaps, because some of the individual subjects chosen are conditions in which the precise value of streptomycin is uncertain. Thus the chapter on pertussis is inconclusive, that on lung abscess and empyema is brief and fails to adjudicate on the alleged inactivity of streptomycin when injected locally into large collections of pus, and the information about the treatment of diseases of the bile passages and of the eye (only one case of panophthalmitis is mentioned) is disappointingly scanty. Most of a long chapter on the prevention of wound infection describes laboratory experiments, and Fleming's name—of all names—is mis-spelt in it. On the other hand, the treatment of tuberculosis, and of plague and tularaemia—two other diseases in which the action of the drug is unequivocal—are well described.

The problem of drug resistance is discussed in several chapters, the first of them having much to say about the strange phenomenon of streptomycin-dependence also. Its authors were the first to discover this. Two chapters describe acquired resistance in tubercle bacilli and its effects, and these contain some of the most up-to-date and valuable information in the book, much of it previously unpublished. This is not an encyclopaedic work, and only selected papers are quoted; but it will be found a valuable reference book by all workers on streptomycin.

L. P. GARROD.

RECENT ADVANCES IN OTOLARYNGOLOGY

Recent Advances in Otolaryngology. By R. Scott Stevenson, M.D., Ch.B., F.R.C.S.Ed. Second edition. (Pp. 395; 8 plates and 106 text figures. £1 4s.) London: J. and A. Churchill. 1949.

Dr. Scott Stevenson has produced an invaluable reference book on the latest work in otolaryngology. Some sections of the first edition have been discarded and new matter introduced on chemotherapy and antibiotics, hearing-aids, and aviation otolaryngology. The book will be most valuable to those intending to take higher diplomas, and to the general practitioner it will bring a clear understanding of modern methods of diagnosis and treatment.

The text is well arranged, with many excellent illustrations. The general practitioner will find of special interest the section on audiometry; the description of the valve aid; pros and cons of tonsil operations in children, with special reference to the recent epidemics of poliomyelitis; and the scope and limitations of chemotherapy and antibiotics. The uses and limitations of the sulphonamides, penicillin, streptomycin, and tyrothricin are discussed in both acute and chronic infections. The risk of their masking signs and symptoms is emphasized.

No mention is made of the single daily injection of procaine penicillin, or of the risk of inducing anosmia and parosmia by instillation of tyrothricin in the nose; or of the glossitis that may follow the use of penicillin lozenges. In the section on hearing-aids there is a full description and very fair appraisal of the national "medresco" aid, with a general indication of the type of patient likely to be helped by a valve aid and the patience needed to educate him in its proper use. The section on aviation otolaryngology deals with the effect of noise on the cochlea, and of changes in barometric pressure on middle ear and nasal sinuses (so-called barotrauma). The remainder of the book comprises most of the first edition re-written and brought up to date. It covers the whole subject and has hundreds of references to original articles.

Some minor criticisms are called for. An excellent description, with illustrations, is given of tonsil dissection, yet this can hardly be called a recent advance; furthermore the condemnation of blunt guillotine enucleation is too sweeping. In the section on chronic suppuration of the middle ear there is a full description of zinc ionization and of Sulzberger's powder, which are both long-established treatments. The use of sulphathiazole powder insufflations should be more roundly condemned—it produces rock-like deposits. No mention is made of Mollison's work on alcohol injection of the labyrinth in Ménière's disease, or of Harmer's work on the radium treatment of intrinsic carcinoma of the larynx. Apart from these minor criticisms, the work is of outstanding merit. Some excellent points noted are: the beautiful "stills" from moving pictures of the larynx, the various conservative methods of treating acute and chronic nasal sinusitis, and the advice which should, at present, be given to patients on the potentialities of the fenestration operation for otosclerosis.

NORMAN JORY.

MODERN UROLOGY

The Practice of Urology. By Harry C. Rolnick, M.D. Volumes 1 and 2. (Pp. 1,245; 1,350 illustrations; 9 plates in full colour. £9 9s. complete.) Philadelphia and London: J. B. Lippincott Company. 1950.

This important work on urology could have been produced only in America. The beautiful quality of the paper, the thousand-odd illustrations, the lavish supply of coloured plates, the price—everything points to its origin in the only wealthy quarter of our impoverished world. But its merit does not lie solely in the magnificence of its production. The American school of urology is an extremely important one, and as this is the latest work from it every British urologist who can afford to do so will want to purchase the book. Its author is the professor and chairman of the urological department of the Chicago medical school, and therefore a fitting person to record recent progress in urology.

The discovery of the sulphonamide drugs and the antibiotics has had a dramatic effect on the former scourge of all genito-urinary surgery, infection of the urinary tract. And the war has added considerably to our knowledge of the treatment of trauma of the genito-urinary organs. Advances are recorded in the sections dealing with these subjects. There is also an excellent summary of what has been called "crush syndrome," or the changes occurring in the kidney as the result of the extensive injury of muscular tissue.

Dr. Rubin H. Flocks has contributed a special article on transurethral surgery in general. This includes resection

of the prostate, the fulguration and resection of bladder tumours, and the transurethral removal of prostatic calculi. Professor Rolnick is obviously a urologist who, when operating on an obstructing prostate, accommodates the surgical procedure to the patient rather than the patient to the procedure, as happens with some surgeons. He describes and makes use of perineal, suprapubic, and retropubic prostatectomy, and on occasions he is even prepared to fall back on that old-fashioned but safe method, a two-stage prostatectomy. All of these operations are well described. The arrangement of the paragraphs under suitable headings and the good index make this an excellent reference book. It is likely to take the place on our bookshelves formerly occupied by that well-known American work Young's *Practice of Urology*, now rapidly becoming out of date.

KENNETH WALKER.

ANTICOAGULANT THERAPY

Coagulation, Thrombosis, and Dicumarol. By Shepard Shapiro, M.D., and Murray Weiner, M.S., M.D. Studies in Biochemistry, Volume 2. (Pp. 131. $5.50.) New York: Brooklyn Medical Press (P.O. Box 99, Station H, New York, 22, N.Y.)

This monograph is largely concerned with the treatment of thrombosis by dicoumarol (3,3'-methylenebis (4-hydroxycoumarin)). The discussion of blood coagulation is carried to such a point that it enables readers to follow the methods advocated by the authors to control dicoumarol treatment. This has led to a somewhat one-sided approach, all other methods of control being rather summarily dismissed. In particular, this applies to the "two-stage" methods, which appear not to be fully understood by the authors. Nor would all workers agree that the 12.5% plasma dilution is as valuable as is here claimed.

The treatment of thromboses by dicoumarol is clearly described and the need for its careful control is emphasized. There is ample evidence that liaison between clinician and pathologist is essential to obviate error and confusion. Clinicians should note that dicoumarol is dangerous to patients with liver disease and during salicylate therapy. The interaction between vitamin K, liver function, and dicoumarol is well expressed.

The estimation of dicoumarol in blood and body fluids is described, and there is no doubt that this will lead to a better understanding of the drug. The introduction of the newer dicoumarol derivatives "tromexan" (Geigy) bis-3,3'-(4-oxycoumarinyl)-ethyl acetate and "P.I.D." 2-phenylindan-1-3 dione (Roussel) has brought new considerations into the subject, and some time must elapse before a clear understanding of the use of the three drugs in anticoagulant therapy can be evaluated. The essential features which govern the action of these drugs must be grasped by those workers who propose to use them, for, to quote Professor Link's Harvey Lecture in 1943, "When I hear that a clinician has induced a frank case of the haemorrhagic sweet clover disease of cattle in man, my usually buoyant spirits are bruised. I regard such blunderings as a direct assault on the integrity of our work."

J. G. HUMBLE.

RECOLLECTIONS OF INDIA

Happy Toil. By Major-General Sir Leonard Rogers, F.R.C.P., F.R.S., Indian Medical Service (ret.). With foreword by Major-General Sir John W. D. Megaw, K.C.I.E. (Pp. 271; illustrated. 18s.) London: Frederick Muller. 1950.

Here is a story of greatness achieved. The author was the fifth of ten sons of a Cornish naval officer; despite indifferent schooling, he lived laborious days till he qualified from St. Mary's Hospital at the head of his year and gained the F.R.C.S. at the age of 25. His execrable handwriting nearly lost him a place in the competitive examination for the I.M.S. and later almost cost him the M.R.C.P. But a proficiency in shorthand, learned with Sir Ernest Gowers, stood him in good stead all his life, and accounts for the mass of interesting detail in this book.

His thoughts of being a medical missionary had to be put aside, mainly on account of his lack of ear for languages, but his life in India is a history of good deeds. With the enthusiasm of youth—and he is an octogenarian—he describes his attack on dysentery and kala-azar, his work on the control of cholera in India and Sicily, and his hopes of deliverance for the victims of leprosy. He tells how he helped to take the sting out of snake bite, most dramatically on one occasion, and of how he brought order into the confusion of fevers when five out of six were misdiagnosed. Even his leaves were spent in searching hospital records or writing books and papers, and the School of Tropical Medicine at Calcutta and B.E.L.R.A. are his children. Yet he is disappointed that he has not found a cure for tuberculosis. There is not a toilsome page in *Happy Toil.*

C. C. CHESTERMAN.

BOOKS RECEIVED

Review is not precluded by notice here of books recently received

Committee Procedure. By K. Gilmour, F.R.G.S. (Pp. 121. 6s.) London: Methuen. 1950.

The Road to Love. By G. O. Roberts. Prefatory Note by W Brown, M.D., F.R.C.P. Foreword by D. R. Mace, B.Sc., Ph.D (Pp. 230, 9s. 6d.) London: George Allen and Unwin. 1950.

What Are You Doing Here? By C. G. Trew. (Pp. 128 10s. 6d.) Edinburgh: International Publishing Company. 1950.

The Spiritual Physick of Rhazes. Translated from the Arabic by A. J. Arberry, Litt.D., F.B.A. (Pp. 107. 4s.) London: John Murray. 1950.

Probability and the Weighing of Evidence. By I. J. Good. M.A., Ph.D. (Pp. 119. 16s.) London: Charles Griffin. 1950.

British Medical Association. Proceedings of the Annual Meeting 1949. (Pp. 468. 25s., postage 1s. 3d.) London: Butterworth. 1950

Midwifery. By R. C. Brown, F.R.C.S., F.R.C.O.G., and others. 3rd ed. (Pp. 894. 18s.) London: Edward Arnold. 1950

Theory of Hearing. By E. G. Wever. (Pp. 484. 48s.) New York: John Wiley. London: Chapman and Hall. 1949.

The Organization of Behavior. By D. O. Hebb. (Pp. 335. 32s.) New York: John Wiley. London: Chapman and Hall. 1949.

Mitchell-Nelson Textbook of Pediatrics. Edited by W. E. Nelson, M.D. 5th ed. (Pp. 1,658. 63s.) Philadelphia and London: Saunders. 1950.

Current Therapy 1950. Edited by H. F. Conn, M.D., and others (Pp. 736. 50s.) Philadelphia and London: Saunders. 1950.

Kinesiology. By K. F. Wells, Ph.D. (Pp. 478. 24s.) Philadelphia and London: Saunders. 1950.

The Thymol and Hanger Reactions in the Etiological Diagnosis of Jaundice. By A. Tallroth. (Pp. 128. No price.) Uppsala: Appelbergs. 1949.

Some Experimental Studies on the Erythropoietic Effect of Yellow Bone Marrow Extracts and Batyl Alcohol. By O. E. Sandler (Pp. 71. No price.) Uppsala: Almqvist and Wiksells. 1949.

Biting Force in Man. By F. Strenger, L.D.S., D.M.D. (Pp. 90. No price.) Stockholm: Aktiebolaget Fahlcrantz. 1949.

BRITISH MEDICAL JOURNAL

LONDON

SATURDAY APRIL 22 1950

CHILDHOOD PSYCHOSIS

At first glance the words "psychosis in childhood" would seem to describe clear-cut and accepted conditions. The paediatrician is aware of the rare juvenile G.P.I., of the commoner post-encephalitic mental states, and of mental states secondary to growing intracranial tumour. Also he may have studied mental defect and so know that defectives are specially apt to have regression phases, manic-depressive swings of mood, and withdrawal states. Neurology carries him thus far. Beyond this paediatricians as well as psychiatrists have drawn attention to the fact that organized mental illnesses, illnesses that are well known as types of insanity in adults, are not in fact confined to the adult population. The insanities can be demonstrated in adolescents, and indeed in younger children and even in the very young. Depression phases are common and severe depression moods not rare. Manic-depressive swing of mood is to be found in the hotch-potch that is called delinquency, this not being a diagnosis so much as a reference to the fact that the juvenile court is apt to take part in directing management of the child. From time to time the papers report attempts of children to commit suicide, and the children's doctor hears of many cases of suicidal attempts which do not reach the papers. Moreover, schizoid cases of all kinds and degrees are to be found by those who look for them in any out-patient department, and from time to time frank schizophrenics appear in the hospital wards —children who seem mad, who are odd, who are withdrawn, whose behaviour is bizarre, or who act as if they were 1 year old instead of 7 or 8. By the uninitiated these children are easily classified wrongly as mentally defective—wrongly because in fact they have normal brains. On the other hand, because of these children's capacity to change in relation to environment, physicians may fail to recognize the seriousness of the condition.

Several papers[1-7] have been published in recent years on psychotic disorders in children, but sooner or later the worker in this field is driven to consider the whole theory of the emotional development of the individual. This, of course, is an enormous subject on its own, and it is not surprising that the paediatrician, already a specialist, hesitates before embarking on the study of a new specialty whose dimensions are of the order of those of physiology. It seems to be inevitable, therefore, that when it comes to the intimate study of a psychotic child paediatrics and psychology part company: this is a pity, because it is only by comparing the emotional development of the psychotic child with healthy emotional development that progress can be made. Lack of precise knowledge is the reason for the widely differing accounts of the frequency of child psychosis given by various observers.

Bradley[8] has surveyed the literature of schizophrenia in childhood, and deliberately gives the impression that this is a moderately rare condition. Child psychiatrists are well aware, however, that once a clinic is known to be interested in this problem the cases tend to arrive in quantities. Moreover, apart from the clearly recognized syndrome, there is immediately a great increase of the number of cases that can be classified as psychotic rather than neurotic if the latent psychosis in much of the psychosomatic disorder of childhood is taken into consideration. In fact according to modern psychological theory there is no clear-cut line between psychotic illness and unorganized disturbances which have a psychotic quality; and more stress is laid now than formerly on the relation between the various kinds of psychological disturbance and the various stages of normal emotional development of the infant and of the child.

At the conclusion of a paper describing a series of cases of child psychosis Kanner[9] wrote: "We must, then, assume that these children have come into the world with innate inability to form the usual, biologically provided affective contact with people, just as other children come into the world with innate physical or intellectual handicaps. . . . Here we seem to have pure-culture examples of inborn autistic disturbances of affective contact." The case histories, however, are so faithfully rendered that the lack in early infancy of the straightforward devotion of a mother can be seen in nearly all the children. Even when the possibility of an inborn factor is allowed there is still plenty of room for research into the effect of the very early environment. This is relatively seldom discussed, for the simple reason that knowledge about what an infant needs at the very earliest stages is only just being gained. In a recent lecture Winnicott[10] made an attempt to state the early infant–mother relationship in terms which can be under-

1 Creak, E. M., and Shorting, B. J., *J. ment. Sci.*, 1944, **90**, 365.
2 Little, H. M., *Penn. med. J.*, 1947, **51** 174.
3 Rapaport, J., *Nerv. Child.*, 1942, **1**, 188.
4 Despert, J. L., ibid., 1942, **1**, 199.
5 Cottington, F., ibid., 1942, **1**, 172.
6 Bruch, H., and Cottington, F., ibid., 1942, **1**.
7 Bradley, C., ibid., 1942, **1**, 141.
8 *Schizophrenia in Childhood*, 1941, New York.
9 *Nerv. Child.*, 1943, **2**, 217.
10 *Brit. J. med. Psychol.*, 1948, **21**, 229.
11 Klein, M., *Contributions to Psycho-analysis*, 1921-45, pp. 282-310.
12 Klein, M., *Int. J. Psycho-Anal.*, 1946, 3 and 4, p. 99. ("Notes on Some Schizoid Mechanisms.")

stood at the same time by paediatricians and by psychiatrists, whether psychiatrists of children or of adults. He assumes the correctness of the theory that the foundation of mental health, so far as the development of psychoses is concerned, is laid down by the mother, who supplies a specialized relationship which is called "being devoted to her own infant." This is similar to the theory that the foundation of health, so far as the development of neuroses is concerned, is laid down by the mother and the father, who build a home environment for the toddler. It is an extension backwards of the well-accepted theory that without a good home a child starts with a serious handicap, especially as it affects his ability to become at one and the same time an individual and a member of society.

Much research remains to be done on the meaning of the word psychosis as opposed to neurosis, as well as on the relation of all kinds of psychological disturbances to the stages of emotional development through which every child must pass on the road towards emotional maturity. About twenty years ago it was held that neurosis in adults was a regression to a period of early childhood, with its fears, phobias, and anxieties unjustified by reality. This is no longer considered to be a correct statement, since it is possible to distinguish a neurotic small child from a normal one. Similarly, at the present time psychotic illness is often described as a regression to an infantile level of emotional development. This again is likely to prove incorrect, since it is possible to distinguish between an infant whose emotional development is proceeding naturally and one whose development shows psychotic features. There are two complicating factors. One is the relatively weak organization of the infant's personality; because of this whatever is gained can easily be lost by untoward circumstances. The other is that healthy emotional development is not by any means exactly correlated with physical health. For instance, the foundations of mental health may be less soundly laid in an infant who is taking everything that is given him and is bursting with physical well-being, than in another infant who is refusing food, not gaining weight satisfactorily, and is a cause of anxiety.

When a serious attempt is made to give personal treatment to a psychotic child the psycho-analyst will find that he is dealing with things which the treatment of non-psychotic cases has already made familiar. It is simply a matter of the accent, and there is no essential difference between adult and child. In neurosis the accent is on the unconscious or repressed conflicts in the whole person, especially the conflict of love and hate, with its origin in early childhood. Depression again is an experience of a whole person, though in analysis the accent is on guilt rather than anxiety, and the therapist finds himself reaching to the beginnings in infancy of the individual's sense of concern, and to the early stages of his ability to feel that what he loves must be protected from himself because of his destructive impulses and ideas.[11] In schizophrenia all these factors appear to some extent, but the main abnormality is that the personality itself is deranged.[12] The accent is on the splitting of the personality rather than on the repression or forgetting of a painful conflict by the whole person. Also there is likely to be found a very carefully organized introversion with an artificial arrangement of relationships, so that all the friendly things are within and the hostile things without. In some cases the analyst finds a most deceptive false integration into the personality of the mother, with lack of real personal sense of self.

The psychotic child needs a specialized environment more or less continuously over a period of time, and for this reason the study of the child should be undertaken at home, provided it is not only a good home but also capable of making an active adaptation to the particular child's needs. Alternatively the child should be admitted to a small hostel which deliberately aims at active adaptation. There is little to be said for the treatment of a psychotic child in a hospital ward. The study of childhood psychosis is extremely important, not primarily because certain psychotic children may be successfully treated, but because of the light such study must eventually throw on the psychogenesis of the highly organized psychoses of adults and also on the problem of healthy emotional development.

HYPOPITUITARISM

Simmonds, in 1914, was the first to describe the pathological lesions and the clinical syndrome of severe, long-standing hypopituitarism.[1] There was nothing noteworthy about the nutritional state of his first patient, but two years later he described two patients with pituitary tumours who had lost much weight, and he introduced the term "pituitary cachexia."[2] By 1918[3] he had become more impressed by the appearance of old age in his sixth patient and made no note of her nutrition. Thus was built up the belief that emaciation and premature senility were important or even cardinal features of hypopituitarism, and it was not until 1939, when Professor Sheehan described in detail the hypopituitarism arising from post-partum necrosis of the anterior lobe of the pituitary gland,[4] that the concept of pituitary cachexia, implying emaciation, received its death blow. It has, however, been a long time dying, particularly on the Continent, where it is still commonly the practice to

call what is now known for certain to be anorexia nervosa Simmonds's disease.

Last year Sheehan and Summers[5] examined the literature on this subject carefully and critically, and selected from the published records 95 cases of true hypopituitarism in which long-standing lesions, examined at necropsy, had destroyed all, or nearly all, of the pituitary without damaging the hypothalamus. On the basis of these cases they were able to build up a clear and comprehensive picture of the clinical syndrome. Elsewhere in this issue we publish an account by Dr. R. T. Cooke and Professor H. L. Sheehan of eight cases of hypopituitarism chosen to illustrate certain aspects of the symptomatology and pathology. In four of these cases pathological proof of the pituitary lesion was established after death; in the remaining four strong presumptive evidence of the sudden destruction of most of the anterior lobe by post-partum necrosis was afforded by the history. The pathological condition of "empty sella" was found at post-mortem examination in two cases; in one instance it was clearly due to post-partum necrosis, but in the other the cause was not certain. Of the four patients no longer alive three died in coma, the signs being those of acute adrenal insufficiency. Permanent amenorrhoea did not develop until six years after the post-partum necrosis in one patient, and in another lactation continued for three months after the delivery at which the pituitary damage presumably occurred, though there was no resumption of the menses.

Paleness of the skin, lack of body hair and axillary sweating, weakness, and sensitivity to cold were features of all the cases. None of these patients was emaciated or had signs of premature senility. In three the correct diagnosis was not made for many years, the patients being treated for "weakness and anaemia" or myxoedema. Probably many such misdiagnoses are made, chiefly because of unfamiliarity with the true picture of Simmonds's disease and clinical unawareness of the condition, though, as Sheehan and Summers state, "A confident diagnosis of complete hypopituitarism can usually be made easily from a short clinical examination. The special tests are chiefly of value for confirmation of the diagnosis, for assessment of the severity of the disease, and for academic study." Correct diagnosis is more than a matter of clinical satisfaction, since most of these patients derive great benefit from testosterone. The case reports of Dr. Cooke and Professor Sheehan should increase the general awareness of the condition, and thus lead to more frequent diagnosis of a disorder which, in all probability, too often escapes clinical recognition.

[1] *Dtsch. med. Wschr.*, 1914, **40**, 322.
[2] Ibid., 1916, **42**, 190.
[3] Ibid., 1918, **44**, 852.
[4] *Quart. J. Med.*, 1939, n.s. **8**, 277.
[5] Ibid., 1949, **28**, 319.

CIVIL SERVICE DOCTORS

On Monday of this week a joint committee representing the B.M.A., the Ministry of Health Medical Staff Association, and the Institution of Professional Civil Servants met to consider a letter from the Treasury which is published in this week's *Supplement*, declining to meet the claims of Government Departments for a revision of salaries. The letter, written on behalf of the Chancellor of the Exchequer, states that he is unable to accept the argument put forward for an increase in remuneration. The Chancellor insists that he must maintain the policy of stabilization of wages. This policy, he believes, would be jeopardized if he attempted to make exceptions to the general rule, observing that "a concession made at the present time would be bound to cause misunderstanding and resentment among the rest of the community, who would regard it as preferential treatment." The Chancellor considers that the claim by Civil Service doctors should be looked upon as a Civil Service claim, to be dealt with on the basis of the policy applied to the Civil Service generally. He does not dispute that there is a case for reviewing remuneration and proposes to set up a committee to go into the question in accordance with the recommendations of the Chorley Committee. The joint committee meeting on Monday did not consider the committee proposed by the Chancellor to be appropriately constituted for the proper consideration of medical salaries and have asked him to see them so that they can place before him details of the harm being done to the medical Civil Service because of what they believe to be inadequate remuneration. At the request of the joint committee, and in accordance with the decision of the Council of the B.M.A., this *Journal* will cease to publish advertisements for vacancies in the medical Civil Service until the present deadlock is broken.

The present dispute has been in the air since August of last year, when the joint committee of the B.M.A., the Institution of Professional Civil Servants, and the Medical Staff Association of the Ministry of Health attempted to bring into line with the Spens Committee recommendations the salaries of Civil Service medical officers; but, as we observed in a leading article in the *Journal* of February 25, the Treasury will not accept this view and insists that the claims should be related to the recommendations of the Chorley Committee, action on which has been postponed. It is of course obvious that the Treasury would be faced with a dilemma if the medical men in the Civil Service are to be treated differently from their non-medical colleagues. But the Government has already approved the increased salaries for university staffs and for those it wishes to attract into establishments dealing with atomic energy.

The effect of the Treasury's decision is already being felt by the Ministry of Health. Since 1947, for example, 20 medical officers have left the Ministry for other posts.

and it has been difficult to fill the vacancies left. In recent months four medical officers have left the Ministry of Supply. The Department of Health for Scotland is four short of a complement of 27 medical officers, and we understand that 15 of the 24 are already seeking other posts. The Ministry of Labour advertised for four posts in 1948, but of the applicants only two were considered to reach the required standard. Thirteen medical officers have transferred from the Ministry of Pensions to the Ministry of National Insurance, because of the better prospects available, and the Ministry has also lost 15 others. The Ministry of Food has been unsuccessful in attracting medical recruits. Before the introduction of the National Health Service this would have been a serious enough position. It is doubly so now, when it is imperative to have in such Departments as the Ministry of Health men of the highest calibre who command the respect and confidence of the medical profession. If medical men and women working in Government Departments find their services to the profession and the community valued at a much lower rate than doctors accepting comparable responsibility elsewhere, then the drain of medical man-power from these Departments will continue, and Ministries will be unable to fill the vacancies or will have to fill them with men of second- or third-rate ability.

The Civil Service generally may be expected to be sympathetic to the request of their medical colleagues for revision of salary. The Civil Service unions have already protested against the Treasury's contention that the Civil Service Arbitration Tribunal should look upon the Government's policy as overriding the merits of individual claims. As the *Manchester Guardian* points out,[1] this has led to a widespread distrust of arbitration, even though the Treasury's argument has not yet been applied outside the Civil Service. This question of arbitration was very much to the fore at the time of the Annual Meeting of the B.M.A. at Harrogate last year. In the Committee Stage of the National Health Service (Amendment) Bill Mr. Aneurin Bevan said, "If both sides agree to go to arbitration, obviously the Minister would accept the consequences." This surely is something which must apply to all sections of the medical profession, however employed, if justice is to be done, and more especially if the right kind of medical men and women are to be attracted into responsible work, whether inside or outside the National Health Service. The medical profession will be alive to the danger that the Treasury argument may be used if the question of the remuneration of general practitioners, still left very much in the air, should come to arbitration, and will do all it can to back the legitimate claims of their colleagues in the Civil Service. Some way out of the present deadlock must be found.

[1] *Manchester Guardian*, April 18.

MEDICINE IS NEWS

Though most people like to feel that they are making history, they are apprehensive of making news—medical men particularly so for many excellent reasons. Their relationships with patients are necessarily intimate; their opinions are often encrusted with qualifying clauses that receive scant treatment from harassed sub-editors; they have scruples about drawing public attention to their work: and they are very busy.

Unfortunately for the doctor's peace of mind many laymen have a gargantuan appetite for news about medicine, an appetite that rivals their thirst for medicine itself. Interest in the doctor's work has increased in the last ten years or so. Many newspapers now have medical men writing regularly for them, describing the latest drugs, explaining why the birth rate goes up (or down), and telling their readers how many beans make five calories. There is in addition another kind of medical news that has been reported for much longer. Cases of road accident, attempted suicide, falling down stairs, dog bite, and so on—many of these are first discovered by a reporter friendly with the hospital porter. And when a well-known person is being treated for some ailment in hospital the Press expects to be able to find out how he is getting on.

The administration of the Health Service is a topic that now excites public interest. Citizens enjoy reading about the cost of running their hospital, for they will have to foot the bill; about changes in the hospital staff, for the new surgeon may take out their appendix; and whether or not B.C.G. vaccine is being tried there. Newspapers have a right to tell them these things, and they are not noticeably laggard in exercising it. But since the Health Service started there has been "widespread dissatisfaction," according to the *Newspaper World*,[1] at the amount of information, particularly from hospitals, available to the Press. That journal therefore undertook a "wide survey of the situation," and found that 70% of the newspapers questioned said that they had difficulty in obtaining information. Another 25% said that there was no real difficulty, but room for improvement, and the remaining 5% were content. The journal thinks that when hospitals were not under Government control they made up their own minds about Press relations; now they fear to invoke the wrath of Government departments for "some unpremeditated piece of publicity which might cast a spotlight upon the National Health Scheme." A solution suggested in the article is that the Minister of Health should permit hospital management committees, or preferably order them, to allow the Press to attend meetings. When confidential matters are discussed the committee could exclude the Press on a majority vote.

It is doubtful whether a solution of this kind is desirable. Even when they are not discussing confidential matters men do not speak freely at committee meetings that will be reported in the Press. The truth comes more readily in private. But the public has a right to read about the day-to-day running of the Service, and possibly some hospitals have been too secretive about their affairs. If so, it is an error on the right side, but one that is better corrected by general advice rather than statutory orders. Those working in the Health Service would be the last

[1] January 12, 1950.

to want it girdled with a *cordon sanitaire*, and if information is more difficult to extract from hospitals than before the Service started the reason is probably that the staffs are busier. Doctors improve relations between the profession and the public by giving information, or allowing it to be given, when it is discreet to do so, but it is the duty of newspapers to treat the news with the discretion it deserves.

PERNICIOUS ANAEMIA OF PREGNANCY

The distinction between Addisonian pernicious anaemia and the pernicious anaemia of pregnancy has been recognized since Osler expounded their differences in a paper in this *Journal* in 1919.[1] Until recent years it has been generally accepted that depression of gastric secretion during the third trimester of pregnancy might result in deficiency of intrinsic factor and thereby lead to megaloblastic anaemia. The observations of Davidson and his colleagues[2,3] and of Fullerton[4] showed that this was improbable. In the pernicious anaemia of pregnancy the blood picture might differ from that of the true Addisonian variety: megalocytosis was often of minor degree or even absent, and the changes in the bone marrow were frequently of a mixed normoblastic and megaloblastic type. Moreover, the therapeutic response to parenteral injection of liver extract known to be potent in Addisonian anaemia was poor or even lacking, whereas recovery followed the oral administration of whole or proteolysed liver. Shortly after the synthesis of pteroylglutamic acid (folic acid) reports were published of its efficacy in cases of pernicious anaemia of pregnancy which had not responded to parenteral injection of liver extract.[5] The present number of the *Journal* contains two papers on this subject. Drs. C. C. Ungley and R. B. Thompson report six cases of megaloblastic anaemia of pregnancy or the puerperium. Vitamin B_{12} was effective in none, but there was a satisfactory response to pteroylglutamic acid in some; in others improvement was only moderate. In all cases the anaemia was eventually overcome, either after delivery or with the aid of yeast, "marmite," and oral liver. In the second paper Drs. J. C. Patel and B. R. Kocher report five cases from Bombay: in all of these there was an optimal or suboptimal response to 40 μg. of vitamin B_{12}.

These two apparently contradictory observations again indicate that the megaloblastic anaemia of pregnancy and the puerperium encountered in one part of the world differs from that seen in another. It is noteworthy that in Ungley and Thompson's cases megalocytosis was absent or only slight, the mean corpuscular volumes ranging from 80–104 μ^3, whereas in the Bombay series the readings lay between 122 and 160.9 μ^3. There is little doubt that Patel and Kocher's patients are examples of tropical megaloblastic anaemia of the Wills type,[6] which is usually considered to be of nutritional origin. Patel[7] has already shown Vitamin B_{12} to be effective in this disorder. Ungley and Thompson's patients were clearly suffering from the megaloblastic anaemia of pregnancy and puerperium familiar in temperate climates. In this disease, nutritional factors appear to be unimportant. Comparable results in similar cases have been reported by Bethell, Meyers, and Neligh[8] and by Day, Hall, and Pease.[9] Ungley and Thompson wisely avoid attempting to explain their observations. Their patients resemble in their response to the anti-anaemic principles the examples of "achrestic anaemia" described first by Wilkinson and Israels[10] in this *Journal* in 1935 and later by other authors.[11-13] Their comment that Castle's hypothesis requires revision will command general agreement, but it is not yet clear how it can be modified to include an explanation of this form of megaloblastic anaemia.

1 *British Medical Journal*, 1919, **1**, 1.
2 Davidson, L. S. P., Davis, L. J., and Innes, J., ibid., 1942, **2**, 31.
3 Davis, L. J., and Davidson, L. S. P., *Quart. J. Med.*, 1944, n.s. **13**, 53.
4 *British Medical Journal*, 1943, **1**, 158.
5 Moore, C. V., Bierbaum, O. S., Welch, A. D., and Wright, L. D., *J. Lab. clin. Med.*, 1945, **30**, 1056.
6 Wills, L., *British Medical Journal*, 1931, **1**, 1059.
7 Ibid., 1948, **2**, 934.
8 *J. Lab. clin. Med.*, 1948, **33**, 1477.
9 *Proc. Mayo Clin.*, 1949, **24**, 149.
10 *British Medical Journal*, 1935, **1**, 199.
11 Waldenström, J., *Blood*, 1947, **2**, 426.
12 Mueller, J. F., Hawkins, V. R., and Vilter, R. W., ibid., 1949, **4**, 1117.
13 Reitano, *Haematologica*, 1949, **33**, 133.

EARLY RISING AFTER CHILDBIRTH

Emil Ries,[1] in 1899, is generally credited with being the first to advocate early rising after operation, while on this side of the Atlantic Jellett[2] in Dublin was one of the first to recommend it after childbirth. Partly as a result of experiences during the years when this country was under bombardment, early rising has now become accepted practice in some obstetric units, not only after normal delivery but also after uncomplicated forceps extraction and caesarean section. Perhaps the most noteworthy feature of the literature on the subject is the absence of articles condemning the practice, a recent paper by Cornell and Mullen[3] being an important exception. The immediate advantages claimed for early rising after delivery include a quicker resumption of normal bladder and bowel function, a lessened incidence of pulmonary and circulatory complications, and a more rapid rate of involution. In addition, and perhaps surprisingly, episiotomy wounds are said to heal not only more quickly but with less discomfort. Where early rising is not the vogue, the carrying-out of active exercises in bed becomes correspondingly more important. But if all the advantages are to be reaped the patient must get up within 36 hours of delivery, for if ambulation is deferred until the fourth day, as is customary in some clinics, then the benefits of early rising and the merits of a full week or more of bed rest are both lost. In this issue of the *Journal* Dr. A. B. Swarbreck reports a small series of controlled cases in which early rising was investigated with the object of finding out whether any disadvantages could be discovered at post-natal examination six weeks after delivery. He concludes that no harmful effects become apparent by that time, and he confirms previous reports that the incidence of post-natal retroversion is not increased.[4] Dr. Swarbreck's cases have not been followed up sufficiently long for a conclusion to be reached about the influence early rising may have on the later incidence of prolapse, but Keller and Ginglinger,[5] after fifteen years' experience with

1 *J. Amer. med. Ass.*, 1899, **33**, 1454. See also leading article in the *British Medical Journal*, 1948, **2**, 1026.
2 *Dubl. J. med. Sci.*, 1912, **134**, 16.
3 *Amer. J. Obstet. Gynec.*, 1948, **55**, 768.
4 Rosenblum, G., and Melninikoff, E., ibid., 1947, **54**, 325.
5 *Gynéc. et Obstét.*, 1948, **47**, 311.
6 *Canad. med. Ass. J.*, 1948, **59**, 170.

this practice, are of the opinion that the number of cases of prolapse is diminished thereby.

All writers on this subject remark on the improvement in the psychological well-being of mothers who rise early after delivery, but Alton[6] rightly emphasizes the need to avoid an inflexible regime. The physical and mental make-up of the individual patient can be studied, and this is particularly necessary in the case of the woman with many children to whom the puerperium often serves as her only holiday. As Dr. Swarbreck points out, early ambulation is not advised in domiciliary midwifery except in very favourable circumstances, because once she is up and about the mother is tempted to resume at least some of her household duties. In hospital practice, on the other hand, the first object of early rising must be to benefit the patient. It should not be instituted in order to enable additional deliveries to be undertaken, and the temptation to discharge the patient from hospital care earlier than the customary tenth day—which she herself is very likely to urge—should be strongly resisted.

SURGICAL TREATMENT OF SUBARACHNOID HAEMORRHAGE

Although spontaneous subarachnoid haemorrhage is now regarded as a fairly common condition, it is only within the last 30 years that its pathology and clinical features have been understood. The morbid anatomical studies of Turnbull[1] and the clinical studies of Symonds[2] helped to throw light on the common cause of such haemorrhage—congenital aneurysms of the circle of Willis and its main branches. The introduction of cerebral angiography by Moniz in 1926 provided a method of demonstrating in life the existence and relationships of such aneurysms. However, neurosurgeons were for the most part slow to use this discovery, and it is only within the last five years, particularly since the introduction of the percutaneous technique, that cerebral angiography has come to be widely employed. As would be expected, the accurate locating of aneurysms which is possible with this method has stimulated interest in methods of surgical treatment. This has usually been reserved for the case in which bleeding from the aneurysm has ceased and has been designed to prevent recurrent bleeding. The operation most commonly undertaken has been carotid ligation in the neck, there being a widespread impression that ligation of the common carotid artery is less dangerous than that of the internal carotid artery. Several surgeons, including Dott, McConnell, and Jefferson, have operated on the aneurysm itself. Some have packed muscle around or into the sac, but in a few cases the aneurysm has been excised or a clip applied to its neck. There is a natural reluctance to treat the lesion surgically after it has ceased to bleed. Follow-up studies of these cases support this attitude. Thus in a recent paper Hyland[2] states that, while the mortality from the original haemorrhage is in the neighbourhood of 50%, if the patient survives this he has an 80% chance of living for many years without recurrence of the haemorrhage.

In a paper appearing in the *Journal* of April 8 (p. 809) Mr. M. A. Falconer suggested that the lesion should be treated at the time of the original haemorrhage. Of 24 patients whom he treated by carotid ligation in the acute stage four died (16%) and four developed a hemiplegia, and of 18 patients (some having had a previous carotid ligation) in whom a direct attack on the aneurysm was made, all except one survived the operation. Because of the serious threat to the patient's life when the first haemorrhage occurs surgical treatment certainly deserves consideration, but it must be borne in mind that carotid ligation during the stage of bleeding is dangerous to life and function, and direct operation upon a basal aneurysm will always carry a risk because of the severe haemorrhage which may occur. Again, congenital aneurysms are often multiple, so that the removal of all the possible sources of subarachnoid bleeding in a particular case may be impossible, as indeed may be the location of the lesion responsible for a particular episode of bleeding. Further study is necessary before the place of surgery in the treatment of acute subarachnoid haemorrhage can be settled. The evacuation of intracerebral clot may sometimes save life: perhaps it will also render carotid ligation at this stage a safer procedure. The value of direct attack on the sac remains to be demonstrated, but the advances that are being made in the understanding of leaking basal aneurysms are an indication that further improvement can be expected.

[1] *Brain*, 1918, **41**, 50.
[2] *Quart. J. Med.*, 1924, **18**, 93.
[3] *Arch. Neurol. Psychiat., Chicago*, 1950, **63**, 61

RELIEF OF ASTHMA

The introduction of a derivative of adrenaline more powerful than adrenaline itself in its action on the bronchial muscles has added to the weapons for combating an asthma attack. Isopropyl*nor*adrenaline, which is sold under various names, was discovered by Konzett[1] in 1940 to be nine times as potent a bronchodilator as adrenaline, but until the war was over it did not become known in this country or the U.S.A. Recently Gay and Long[2] have submitted a report on a clinical trial of this substance to the Council of Pharmacy and Chemistry of the American Medical Association. They came to the conclusion that the best method of giving the drug is by inhalation of a mist of a 1 in 200 solution. They favour this method for three reasons: first, because relief was obtained not only in mild attacks but also in moderate and severe attacks; secondly, because side-effects were negligible; and thirdly, because in patients with chronic infective asthma there was an increase in expectoration and the sputum became thinner, more abundant, and more easily raised. The duration of the relief obtained by the inhalation depended on the severity of the attacks, being as short as 15 minutes in the severe cases. Further inhalations were then necessary. The next best route of administration was found to be by tablets dissolved under the tongue, each tablet containing 10 mg. of the drug. The great advantage of this method is its convenience for the patient. It was found very effective in mild asthma, particularly if used promptly. Benefit was felt in three to five minutes and lasted up to four hours. If, however, a full attack was first allowed to develop it was much less effective. Moreover, it was ineffective in many patients with attacks of moderate severity; six patients with frequent attacks of severe

[1] *Arch. exp. Path. Pharmak.*, 1941, **197**, 27.
[2] *J. Amer. med. Ass.*, 1949, **139**, 452.

asthma obtained no relief at all. Side-effects were commoner after sublingual administration: transient palpitation was the chief symptom, though it was not distressing. Other side-effects were precordial pain, headache, and nausea. Gay and Long also gave the drug by subcutaneous injection, at first in 1 in 1,000 solution. Though this brought dramatic relief in patients with severe asthmatic attacks the side-effects were so serious that the solution for injection was reduced in strength to 1 in 5,000. This, given subcutaneously, was found similar in effect to adrenaline 1 in 1,000 given intramuscularly, with the notable difference that some patients who received no benefit from adrenaline were benefited by isopropyl*nor*-adrenaline. The authors consider this action in patients resistant to adrenaline to be very valuable. When the drug was swallowed the effective dose was found to vary greatly —15 mg. being too much for some and 50 mg. too little for others. There were many side-effects, and it is clear that this method of administration has no advantage over the others. Electrocardiographic changes which suggested coronary insufficiency and myocardial ischaemia were observed after subcutaneous injection of a 1 in 1,000 solution in a few patients who complained of substernal discomfort. Though the authors do not propose that 1 in 1,000 solution should ever ordinarily be used, they conclude that overdosage may be dangerous in patients in whom an attack of asthma has reduced the supply of oxygen to the myocardium.

MENTAL INFIRMITY IN THE AGED

Many of the old men and women who used to be cared for in the wards of Poor Law infirmaries suffered more from the mental than from the physical effects of senility. In "Medical Notes in Parliament" this week we report the remarks of a member of the House of Lords who drew attention to the alteration which recent social changes have brought about in the position of the old and infirm. There is now a gap between the social welfare services and the hospital services. The Ministry of Health has recently written to regional hospital boards and hospital management committees about the care of these old people (see *Supplement*, p. 172) and has offered advice which is largely based on the recommendations of the B.M.A. Committee on the care and treatment of the elderly and infirm.[1] The Ministry suggests that a short-stay psychiatric unit should form part of the geriatric departments which are to be established in at least the bigger hospital centres. Elderly patients whose mental condition is disturbed but who do not have to be admitted urgently to a mental hospital are to be investigated and perhaps given temporary treatment in the proposed short-stay units. Some may be well enough to return home after investigation; others may have to be admitted to a mental hospital, but for many of these old people some other form of accommodation will have to be provided. The Ministry proposes "long-stay annexes" for the elderly patient with mental infirmity but without serious behaviour disorder. Such long-stay annexes were regarded by the B.M.A. Committee as "possibly the most important component of the whole co-ordinated (geriatric) service." The Ministry's circular emphasizes that "the purpose of this provision is not to set up new mental hospitals for the treatment of acute psychoses but to provide accommodation for old people undergoing the slow deterioration associated with increasing age." The suggestion is made that regional hospital boards could perhaps find buildings suitable for long-stay annexes on their mental hospital estates. The convenience of such an arrangement might be offset by the reluctance of the elderly patients or their relatives to agree to residence in a building so closely associated with a mental hospital.

[1] *British Medical Journal, Supplement*, 1947, **1**, 133, and 1948, **2**, 71.

TREATMENT OF CHRONIC HEADACHE

Headache is one of the most frequent symptoms of disease, and it may occur in a variety of conditions—from a trivial 48-hour pyrexia to meningitis or a cerebral tumour. The chronic headache, so often seen in general practice and in the out-patient departments of most hospitals, is usually of psychogenic origin. It is intensified by stress and psychic conflicts, and physical and laboratory examinations reveal no evidence of disease. Friedman and his colleagues,[1] at the Montefiore Hospital in New York, have recently reported on the symptomatic treatment of the psychogenic headache, and also that of the post-traumatic variety, which they define as a headache persisting for more than two months after a head injury. While they agree that there is an important psychogenic factor in such headaches, they believe that physiological mechanisms may also be involved, such as distension of the cranial blood vessels and sustained contractions of the muscles of the head and neck. The effect of various drugs with or without psychotherapy was investigated in over 500 patients suffering from psychogenic and post-traumatic headache. The drugs used included analgesics of the aspirin–phenacetin–caffeine type, barbiturates, ergotamine tartrate, vasodilators (nicotinic acid and 2-benzyl-4,5-imidazoline hydrochloride), sex hormones, and vitamins. Control tests were made with a placebo or an injection of isotonic saline. The best results were obtained with analgesics, although they were only slightly better than those obtained with a placebo. None of the other drugs gave better results than the placebo. Many factors seemed to influence the effectiveness of treatment. Thus the patients attended a special headache clinic and they were given a complete physical examination, including skiagrams of the skull and electroencephalograms. This in itself was a psychotherapeutic measure and allayed the fears of many patients. It was also found that the personality of the physician giving treatment, the time he spent with the patient, and the interval between the interviews, all influenced the result. Many patients did better when they were seen weekly rather than monthly. These findings strongly suggest that the effectiveness of the symptomatic treatment of psychogenic and post-traumatic headache is largely due to the fact that the patient is under treatment: some 50–60% of patients improved on any form of therapy. A small group was given psychotherapy as well as drugs, and the combined treatment appeared to be more effective than drug therapy alone. This confirms the well-recognized fact that to overlook the psychosomatic aspect of chronic headache by treating the headache alone and not the patient usually results in failure.

[1] *J. Amer. med. Ass.*, 1949, **139**, 195.

REFRESHER COURSE FOR GENERAL PRACTITIONERS

HYPERTENSION—I

BY

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Hypertension is a syndrome and not a disease. A large number of cases with high blood pressure fall into the group which is known as primary or essential hypertension. This means that no pre-existing disease which might have caused the hypertension can be discovered. In other words, as Wakerlin (1949) has said, "'Essential hypertension' is a designation born of ignorance and is equivalent to 'fever of unknown cause.'" Although we are ignorant of the cause of essential hypertension I believe that it is much more than a merely negative diagnosis, and that it will turn out to be a definite entity with a recognizable pathogenesis. A family history of hypertensive disease is present in a high proportion of cases of essential hypertension. They tend to conform to a certain bodily type, and many believe that they also have certain psychological characteristics.

Essential hypertension tends to run a definite course; it probably begins quite early in life, but is usually seen by the physician in middle-aged or elderly persons.

Hypertension secondary to renal or endocrine disorders is, on the other hand, commoner in young persons. The most important renal causes of secondary hypertension are nephritis, pyelonephritis, congenital abnormalities of the kidney, and pregnancy toxaemia. The endocrine causes are Cushing's syndrome and phaeochromocytoma, and occasional cases are due to coarctation of the aorta.

In these two brief articles I shall not deal with the rarer of these causes of hypertension, nor shall I discuss the systolic hypertension of old people. As the aorta and large vessels become less and less elastic a rise in the systolic pressure without any similar increase in the diastolic pressure is the natural result according to simple physical laws. The finding of a blood pressure of 180/90 in an arteriosclerotic person approaching 70 years of age should simply be regarded as part of the process of growing old.

The Mechanism of Hypertension

It is natural to suppose that an increase in blood pressure is a process of adaptation, and it may therefore have a purpose in overcoming resistance in some part of the circulation. There is considerable evidence that this is the case.

It is known that in uncomplicated human hypertension there is no change in the cardiac output, in the total blood volume, or in the viscosity of the blood. The increased pressure is unquestionably due to a constriction of the arterioles, causing an increase in the peripheral resistance. Although the cardiac output remains normal the work of the heart is of course increased.

The modern work on experimental hypertension begins with the experiments of Goldblatt *et al.* (1934), who showed that by constricting the renal arteries and thereby reducing the blood supply to the kidneys a rise in blood pressure was promptly and constantly produced. If the constriction was moderate a condition resembling benign essential hypertension was produced, and if the constriction was severe the state of the animals resembled that of malignant hypertension in that they developed arteriolar necrosis in various organs, though not, however, in the kidneys, because by the very nature of the experiment the renal arterioles were protected from the effects of the high blood pressure. If the renal artery of only one kidney was constricted, hypertension was usually more transient and less severe, and if the affected kidney was removed the blood pressure returned to normal.

Wilson and Byrom (1939) found that severe hypertension of the malignant type could be produced in rats by constriction of only one renal artery, in which case the pathological changes of malignant hypertension, with their characteristic arteriolar necrosis, could be found in the opposite kidney. They speak of a vicious circle in hypertension (Wilson and Byrom, 1941) in the sense that ischaemia of the kidney sends up the blood pressure, and if the rise in diastolic hypertension is severe enough arteriolar changes are produced which damage the kidney still further and so produce an even greater state of renal ischaemia. That the arteriolar injury is in fact due to increased intravascular tension is shown by Byrom and Dodson (1948) in further experiments in which they raised the intravascular pressure acutely by injection of saline and produced arteriolar necrotic lesions in the kidney. The bearing of these findings upon human hypertension will be discussed later.

Soon after the original experiments had been made it was found that the hypertension produced by renal ischaemia was not brought about by a nervous mechanism. It had long been known that a substance called "renin," which was capable of raising the blood pressure, could be extracted from the kidney, and it is now known that renin is an enzyme which acts on some substance present in the plasma to produce another substance now known as hypertensin, which raises the blood pressure. Other enzymes (hypertensinases), which seem to be widely distributed in the body, are known to destroy hypertensin.

Since experimental hypertension in animals so closely resembles essential hypertension in man, it is tempting to assume that the initial pathology of essential hypertension is a narrowing of renal arterioles, leading to ischaemia of the kidney and an excessive production of renin. This would suggest a compensatory purpose to ensure that the kidney received an adequate blood supply. An enormous amount of subsequent investigation, however, has failed to prove the connexion between the kidney and essential hypertension. There are, in fact, certain rather important objections to the hypothesis. The first is that biopsies of renal tissue removed at operation in patients with essential hypertension show no significant renal vascular lesions in nearly 30% of cases (Castleman and Smithwick, 1943). Against this objection one may ask what is a significant vascular lesion, and one may also point out that a very small reduction in arteriolar calibre may produce a very considerable obstruction to blood flow when the whole vascular bed of the organ is being considered.

The second objection to the renin theory is that excess of renin cannot be discovered in the blood in chronic

hypertensive states in man, but here it must also be admitted that it cannot be discovered in similar chronic states of hypertension in animals, despite the fact that the hypertension has in that case been caused by interference with the renal circulation. In acute hypertension in animals and in man (pregnancy toxaemia and acute nephritis) Dexter and Haynes (1944) have shown that an excess of renin may be present, so that it is possible that in the chronic stage another mechanism is brought into play, or else the amount of renin present is too small to be detected by methods at present in use.

We know that hypertension, apparently indistinguishable from essential hypertension, occurs in Cushing's syndrome, in which the primary defect is in the pituitary or the adrenal gland, and in the treatment of Addison's disease hypertension has often been produced by deoxycortone and sodium chloride. Selye *et al.* (1943) have produced nephrosclerosis and hypertension in animals by the administration of corticoid compounds and salt. Shorr *et al.* (1945) have produced a vaso-excitor material by the anaerobic incubation *in vitro* of normal kidney. They believe that it is distinct from hypertensin, that it plays a part in the response of the vascular system to shock, and that it may have some significance in the production of hypertension. It is thus possible, if not probable, that hormonal factors other than renin play an important part in the production of hypertension in man, and we must leave the controversy at present unsettled.

The fact that the blood pressure is sometimes reduced by sympathectomy operations does not in any way prove that essential hypertension in man is produced by a nervous mechanism, since lowering of sympathetic tone might reduce the blood pressure whatever its initial mechanism.

That hypertension in man may have a renal origin is shown by its frequent occurrence in nephritis, and by the fact that occasional cases are known in which the removal of a pathological kidney has reduced the blood pressure to normal. The question at issue is therefore not whether hypertension in man may sometimes be due to kidney disease, but whether all forms of human hypertension, especially the essential cases, are renal in origin.

Essential Hypertension

Essential hypertension is usually seen in the so-called benign form. Some authorities estimate that about one-quarter of the population suffer from some degree of hypertension in later life, and in many of these it is the direct or indirect cause of death. In all probability the condition starts quite early in life but, being symptomless, is not usually recognized. Anyone who has taken the blood pressures of a large number of students or recruits realizes that a proportion of them tend to have a blood pressure higher than average, especially if they are nervous of the examination. There is considerable evidence that this group is largely composed of people who will tend to have hypertension later in life.

Ayman (1948) has shown that this tendency for the blood pressure to rise to abnormal levels is much commoner in the children of hypertensive parents, and Platt (1947) has shown that, whereas a family history suggestive of high blood pressure is present in most cases of essential hypertension, this does not apply in cases of hypertension secondary to renal disease. Persons who suffer from essential hypertension in middle age are often rather broadly built, with broad faces, fair hair soon becoming grey, and a rather ruddy, healthy-looking complexion. They tend to look rather more than their age and often show a tendency to nervous flushing, not only of the face but of the neck and upper chest. Their blood pressures are usually extremely labile, going up with the least anxiety, and coming down almost to normal levels with rest and reassurance. An initial blood pressure of 230/120 may become 150/90 after a few days' observation in hospital.

Usually, hypertension remains symptomless until middle age or later. It may be discovered for the following reasons.

First, during a routine medical examination undertaken for life insurance or other purposes.

Secondly, the blood pressure is usually taken as a routine during pregnancy and the early stages of essential hypertension may thus be revealed.

Thirdly, women at the menopause who complain of flushing sensations frequently ask their doctors to test the blood pressure.

Fourthly, hypertension may be revealed by the onset of symptoms caused by the disease.

Cardiac failure is the cause of death in most cases of essential hypertension. The commonest symptoms therefore are those of cardiac origin. They may take the form of progressive exertional dyspnoea, later accompanied by ankle oedema; or of acute left ventricular failure, with attacks of paroxysmal nocturnal dyspnoea; or of angina pectoris. Hypertension predisposes to coronary occlusion, an attack of which may be the first indication of illness. Cerebral complications, next to heart failure, are the commonest cause of death, and cases may be seen for the first time because of a sudden hemiplegia. Benign essential hypertension never leads to renal failure, though renal-function tests may be slightly depressed in elderly hypertensive subjects, and occasionally there is a little albumin in the urine, especially if cardiac congestion is present.

The relation of headache and dizziness to hypertension is very difficult to define. It is certain that many patients with extreme degrees of high blood pressure live and die without complaining at any time of either symptom. If dizziness is described it is never rotatory or labyrinthine in type. Patients who give a clear history of vertigo of this kind will always be found to have some upset of labyrinthine function, whatever may be the height of their blood pressure. The so-called dizziness of the hypertensive is a feeling of light-headedness, especially on regaining the upright position after stooping.

Many cases of malignant hypertension (described below) develop severe paroxysmal incapacitating headache, often accompanied by vomiting. Frequent or incapacitating headache in benign hypertension is unusual except in those who have had a tendency to headache most of their lives—many of them have had typical migraine in former years—and in the very many hypertensive subjects who have been given an anxiety neurosis by the discovery of their high blood pressure. It would not be far from the truth to say that the majority of symptoms of hypertension are iatrogenic. True hypertensive headache may be frontal or occipital and is usually most prominent in the early morning.

Malignant Hypertension

Malignant hypertension, which is probably only a more severe variety of essential hypertension, is distinguished by the development of papilloedema and other manifestations of hypertensive retinopathy, a very high diastolic pressure (140 or over), and a rapidly downhill course leading to renal failure and death within two years of the onset of symptoms. The age at which symptoms commonly appear is between 40 and 50. Mostly they take the form of severe

paroxysmal headache with vomiting, but in some cases cardiac symptoms are prominent. In other cases it is loss of vision which brings the patient first to the optician and then to the doctor. Usually the patient when first seen is clearly in the malignant phase of hypertension; sometimes he is known to have had a high blood pressure for several years.

This article will be concluded next week.

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FORM AND FUNCTION IN THE RENAL TRACT

INAUGURAL MEETING OF RENAL ASSOCIATION

The newly formed Renal Association held its first meeting on March 30 at the Ciba Foundation. Mr. John Sophian was elected secretary, and an executive committee was formed consisting of Mr. F. J. F. Barrington, Professor K. J. Franklin, Mr. D. F. Ellison Nash, and Dr. W. W. Payne. It is hoped to hold quarterly meetings.

Mr. ELLISON NASH gave an address on "Form and Function in the Renal Tract," discussing mainly renal lesions in the child. He first described the embryology of the renal tract, and pointed out that in post-natal life the nephrons continued to form, and the Wolffian duct to grow and to be taken up into the bladder. Gross deviations from the normal were well known, and he mentioned a few of them—the solitary kidney, arrest of the kidney in ascent or in rotation, the double pelvis, the double ureter with one opening, and the ectopic kidney opening outside the bladder, probably into the posterior urethra. The last-named abnormality was one of the commonest causes of enuresis. A child might be labelled a bed-wetter, and it might be some years before the condition was diagnosed. The clinical significance of such a developmental abnormality depended upon the powers of evacuation of the accessory ureter. If it was able to excrete the urine there was not much risk of infection, but if stasis occurred, infection nearly always followed.

Great strides had been made in the understanding of the pathology of these conditions during the last few years; the literature was voluminous and the picture fascinating but confusing. Mr. Nash went on to discuss derangements of function and their causes. He mentioned some recent work suggesting that nicotine stimulated the pituitary in its task of regulating renal flow. The output of urine per pound of body weight fell after the ninth month. Renal function was not mature until the second year. Tubular function in the infant might be extremely poor, and the slightest upset of fluid balance affected the kidneys and prevented a proper clearance of chlorides and urine. In the infant there was only a narrow range of alkali reserve. The kidney could not cope with anything beyond that range, and failure was even more likely if there was any renal damage, which was not uncommon.

The newborn infant's bladder emptied itself automatically at a certain capacity. As the capacity of the bladder increased by natural growth and physiological maturity, the contractions became inhibited at a higher nervous level; some of the contractions were accompanied by a desire to void and others were not. The majority of children with enuresis had an immature bladder. Psychiatric or psychological causes of enuresis were probably very few and far between. Of the children coming to hospital with enuresis 30% had gross organic disease—ectopic ureter, gross infections, and other conditions. It was unfair offhand to label a case of enuresis "psychological" when there was a one-in-three chance that there was organic disease.

MEDICAL ART SOCIETY EXHIBITION

[FROM A SPECIAL CORRESPONDENT]

Calm festivity is the first impression conveyed by the Medical Art Society's exhibition at Walker's Galleries, Bond Street, London (April 17–29), and the enjoyment with which these medical men and women have evidently filled their canvases is communicated with skill and charm to the visitor. Members of the French Salon des Médecins are also showing some of their work, and reveal an *expertise* that not all their British colleagues attain. Two landscapes catch the eye immediately (17 and 73). Both convey an effortless vigour that exemplifies the Taoist text "Perfect activity leaves no track behind it." In the first, "Swiss Morning," Dr. Gladys Ward depicts snow-clad peaks with the enthusiasm of one who has enjoyed walking among them, and in the other Dr. L. D. Berger, of the Salon, has spread a glistening autumn scene on the canvas with a palette knife.

Landscapes predominate, and Mr. T. Holmes Sellors and Dr. Hugh Stannus depict some characteristically English scenes with charm and skill, while Sir Philip Manson-Bahr, the president of the society, exhibits several tropical scenes. Dr. R. A. Beaver is exceptional in preferring still-life—a type of painting at which professionals are more apt to succeed—but his pictures of flowers (42 and 57) have a harmonious splendour that reveals both freshness of vision and assimilation of the work done since the Impressionists. Portraiture again is elusive for the amateur—indeed, few professionals to-day go further than an expensive likeness—but No. 63, by Dr. André Boissier, is a perceptive study, and No. 4, by Dr. Eric Topham, is expressive if not quite so accomplished.

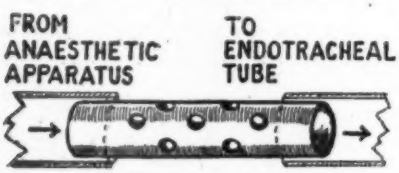
Most of the work reveals strong Impressionist influence, and when some of the painters have tried something in later vein they have not always managed to avert their gaze from modern poster art. But Dr. A. B. Hewlett has succeeded in doing so with his "Boat House" and "The Tree," in both achieving clarity and vigour without superficiality. More subdued are Sir Henry Bashford's compositions, and his "Champagne" shows a sober tranquillity that must be rarely inspired by that refreshment. All are delicate well-finished works, especially the contemplative "Trout Stream." Mr. Frank Forty has neatly captured in his "Hastings" the wateriness of boats even when beached, and Dr. Francis Roles's carefully painted street scene (26) shows individuality. Nearly all the pictures reveal unexpectedly high accomplishment and convey a holiday spirit—whether of gusto or relaxation—that is a delight to share.

The Report of the Central Council for Health Education for 1948–9 singles out four of its activities for special mention. Improvement of cleanliness in the preparation of food is given first importance because of recent deficiencies in this direction. Education in the principles of diet has been studied, with recollections of the lessons taught by the war, and a campaign on this subject will be made as soon as food supplies improve. Health education in industry has been accepted as an important topic and is to be increased. The Council has been studying the Health Service Act in connexion with the prevention of illness and the aftercare of the sick, which are now the responsibilities of the local health authorities.

Preparations and Appliances

AN ENDOTRACHEAL CONNECTOR FOR INFANTS

Dr. DAVID PICKEN, senior registrar, Department of Anaesthetics, Cardiff, writes: In the administration of endotracheal anaesthesia to infants and young children the use of the "T" connector popularized by Dr. Ayre is now general. One disadvantage of this connector is the ease with which the "blow-off" orifice becomes obstructed underneath the towels. The connector here illustrated obviates this danger. It consists of a short metal tube 2¼ in. (5.7 cm.) long and ¼ in. (0.95 cm.) internal diameter perforated by some 15 holes, each of ¼ in. (0.3 cm.) diameter. The sum area of these holes is nearly twice the cross-section area of the tube, and it is unlikely that more than half of the holes will be blocked at any one time. One end of the connector is attached to the endotracheal tube and the other to the anaesthetic apparatus.



The connector has been used in this department with great satisfaction for some six months for children having plastic and other types of surgery. It may be obtained from Medical and Industrial Equipment, Ltd., 12, New Cavendish Street, London, W.1.

Reports of Societies

UNDETECTED FOREIGN BODIES IN THE BRONCHUS

At a meeting of the Liverpool Medical Institution on March 23, with Mr. H. V. FORSTER in the chair, Mr. LESLIE J. TEMPLE read a short paper on "The Undetected Foreign Body in the Bronchus."

Mr. TEMPLE pointed out that, while the known inspiration of a foreign body presented no diagnostic difficulty, certain cases in which there was diagnostic doubt might prove to owe their aetiology to the presence of a foreign body in the bronchus. Cases were described in which such a diagnostic problem had presented. They included that of a seaman with part of a spectacle lens in his bronchus who was treated for a long time as a case of tuberculosis. A girl with a screw in the bronchus, apparently since childhood, had attended hospital because of haemoptysis. A woman had a glass tube in the lung, and no cause was found for its presence. Bronchiectasis in a child was found to be due to a piece of rough grass inhaled through a pea-shooter. Two other patients, one a child of 20 months, the other a child of 9 years, were both severely ill with bronchial obstruction and resulting bronchiectasis. Both were subjected to pneumonectomy, and the presence of granulating tissue in the absence of tuberculosis strongly suggested that a foreign body had been lodged in the bronchus. The last case he described was one in which the presence of a bronchoscope bulb in an upper lobe bronchus confused the issue, the true diagnosis in this case being carcinoma. In conclusion, Mr. Temple stressed the importance of bearing in mind the possibility of a foreign body in the bronchus in the differential diagnosis of any obscure chest disease.

In the discussion which followed, Dr. PHILIP L. ROBINSON recalled the case of a woman aged 29 who at the age of 2 years developed tuberculous disease of the upper dorsal spine. This was treated successfully, and eighteen months later she "swallowed" a halfpenny. No coin was discovered on *x*-ray examination, and it was presumed to have been passed unnoticed. At the age of 28 the patient contracted scarlet fever and coughed and vomited on many occasions. During one of these bouts a considerably corroded halfpenny appeared. Radiographs of the chest were taken, and the patient was then reported as having a lung abscess from which the halfpenny was thought to have been evacuated. A year later the patient was referred for further investigation. The lungs and bronchial tree were found to be normal, and it was considered most unlikely that a halfpenny could have passed down the trachea of a child aged 3. A barium swallow revealed the presence of a small oesophageal diverticulum just about the level of the spinal tuberculous disease. Presumably, therefore, the spinal deformity held up the coin during its passage down the oesophagus, and it ulcerated through into the mediastinum, where it remained for twenty-four years until disturbed by repeated vomiting.

At the same meeting Mr. BRYAN MCFARLAND read a paper on "Bone-grafting," and described the technique he had used with reasonable success for just over twenty years. Out of 105 cases of all kinds, primary union had occurred in 98 cases, and in 5 of the remaining cases union had been obtained at the second attempt.

PELVIC TUBERCULOSIS

At a meeting of the Edinburgh Obstetrical Society on March 8, with the president, Dr. E. CHALMERS FAHMY, in the chair, papers were read by Professor C. Cameron and Dr. W. D. A. Callam on pelvic tuberculosis in the female. Professor CAMERON drew a comparison between the occurrence of genital tuberculosis in the male and female. He said that in the male the incidence was 5% of all tuberculous lesions, and in 60% of cases was associated with renal lesions. In the female the incidence was higher but the condition was infrequently associated with renal lesions. Because many cases did not present localizing symptoms and many others were treated surgically in gynaecological wards, genital tuberculosis had seldom been seen or diagnosed by a sanatorium worker. Clinically, the condition was that of an isolated tuberculous lesion, though there might be a history of pleurisy or some other transient tuberculous condition. The mode of infection was usually blood-borne, although direct involvement from widespread tuberculosis of the peritoneal cavity was a possibility. Routine endometrial biopsy in patients with sterility had revealed cases of tuberculous endometritis more frequently; it was almost always associated with a degree of tubal involvement. Diagnosis was by no means easy, but might be assisted by culture of the menstrual blood. Genital tuberculosis was a problem to be faced by specialists of tuberculosis and gynaecology, and there was still much to learn about the diagnosis, pathogenesis, significance, and treatment of this disease.

Dr. CALLAM analysed 67 consecutive cases of pelvic tuberculosis. He said this was a disease of the child-bearing years, and the presenting symptoms were pelvic pain and vaginal bleeding. Amenorrhoea was uncommon, but the incidence of infertility in the series was 84.5%. In 40% of the patients there was evidence of tuberculosis elsewhere, most frequently in abdominal organs, lymph glands, and lungs. The common sites of genital involvement were the tubes, uterus, and ovaries in that order, but involvement of the cervix was recorded in two patients. In 24 cases (35.8%) treatment was non-operative, and was carried out in the patients' own homes as there were no beds available in sanatoria. Of 43 patients treated surgically, with an operative mortality of 6.9%, in 23 hysterectomy with bilateral salpingo-oophorectomy was performed and in the remainder surgery was more conservative. A follow-up revealed that a further 11.8% were known to have died from a tuberculous lesion and 80% of the surviving patients claimed good health. Among the conclusions from a study of this series was the apparently low incidence of genital tuberculosis and the infrequent evidence of tuberculosis elsewhere in the body. Pelvic tuberculosis was difficult to diagnose without laparotomy, but modern cultural methods would perhaps prove advantageous. Opinions on the best treatment differed widely, but the best results seemed to have followed radical surgery. Streptomycin and para-aminosalicylic acid might change the practitioner's attitude towards pelvic tuberculosis. Controlled clinical investigations of the effects of these drugs were urgently required.

Correspondence

Maternity and the N.H.S.

SIR,—I cannot reply to all the criticisms of my article on "Maternity and the National Health Service" (February 18, p. 392). In regard to the urgent need for co-ordination of the maternity functions of the local authorities, boards, and executive councils I greatly value the support of Dr. C. Tangye and Mr. K. Vartan (March 11, p. 605). Dr. Tangye speaks with the authority derived from long experience as an administrator and as a member of the departmental committee on maternal morbidity and mortality. Mr. Vartan points to methods for reaching some measure of local co-ordination, but he would doubtless agree that, helpful as it is, such loose and friendly accommodation between the agencies concerned must inevitably fall short of that compact administrative fusion of interests which is essential for unitary control.

This co-ordination is as much in the interests of the G.P. as it is imperative for the security of mother and child. For continuity of supervision is possible only when midwife, doctor, and clinic and hospital officers are linked as a team. This in its turn can function effectively only if the doctor has access to the hospital and clinic. Otherwise his midwifery is robbed of its interest and he finds himself in a backwater in which he becomes more and more stranded as the years go by. He can help materially in the medical care of his patients but he cannot become an obstetrician.

It is my firm conviction that a maternity service which accepts the G.P. as an integral member of its staff must incorporate these principles in its evolution. This ideal can be reached only by the doctor realizing that it is not a man's job to undertake the midwifery that happens to come his way in a general practice of 2,000. With a birth rate of 17 per 1,000 this means 34 deliveries a year, half of whom go to hospital. With this quota, and a forceps rate of 4%, the doctor will be called upon to use his instruments four times in six years. Can he become or remain experienced at this rate? If he is to derive the satisfaction that alone comes from sound work he must, after his special training, seek wider opportunities for the practice of his art. It is here that the grouping of practices will play an essential part.—I am, etc.,

London, W.12. JAMES YOUNG.

Acute Perforated Peptic Ulcer

SIR,—Since the publication of our paper[1] on the fall in mortality of acute perforated peptic ulcer, the figures for 1949 have been carefully analysed and show a further fall in operative mortality. The following figures are taken from Table III in the original paper, with the addition of the 1949 results.

	1945	1946	1947	1948	1949
Total Cases	45	53	58	57	69
Total Deaths	9	10	8	3	5
Unoperated cases					
Number	4	7	6	3	5
Deaths	4	7	5	2	5
Operated cases					
Number	41	46	52	54	64
Deaths	5	3	3	1	0

It will be observed that during 1948 and 1949 there was only one death among 118 operated cases. The five cases not operated on, who died, were as follows:

M. 64 (D.U.) ..	3-day perforation ..	Peripheral circulatory failure not responding to treatment.
M. 64 (D.U.) ..	3-day perforation ..	" "
M. 72 (D.U.) ..	15-hour perforation ..	" "
M. 63 (G.U.) ..	2-day perforation ..	" "
M. 80 (D.U.) ..	Diagnosed as coronary thrombosis; previous anginal pain.	" "

The very low operative mortality which can be achieved sets a difficult target for those who believe in the medical management of acute perforations. Gill and Jenkins's[2] series of conservatively treated duodenal ulcers is, unfortunately, still too small for a final comparison with our series. However, they can reasonably omit their first four deaths, as they were patients whose peripheral circulatory failure did not respond and who would not have been operated on even if a surgical bias had existed. Although we advocate a surgical policy we hope that their series will be continued.

We have been very conscious of our debt to our anaesthetic colleagues, but, unlike Dr. R. Mailer,[3] we cannot demonstrate that the big fall in mortality occurred before the introduction of sulphonamide therapy. Our series had the advantage of having an easy and uniform availability of senior anaesthetists throughout the period recorded. We feel that modern anaesthetic techniques have appreciably contributed to the successful results, but to a lesser extent than antibiotics.

I am grateful to Dr. George Graham[4] for reminding me that I had not mentioned the post-operative administration of ascorbic acid. This has been a routine, and the recommended dose is 200 mg. three times a day for five days.—I am, etc.,

London, N.W.10. F. AVERY JONES.

REFERENCES
1 Jones, F. Avery, Parsons, P. J., and White, B., *British Medical Journal*, 1950, 1, 211.
2 Gill, W. G., and Jenkins, T. P. N., ibid., 1950, 1, 488.
3 Mailer, R., ibid., 1950, 1, 372.
4 Personal communication.

The G.P. at the Crossroads

SIR,—Having carefully read the report on general practice in England to-day by Dr. J. S. Collings in the *Lancet* (March 25, p. 555) and having discussed it with many colleagues, especially in general practice, I feel compelled to criticize your leading article on this report in the *Journal* of the same date (p. 709). Indeed, I find, as Dr. Collings said on other matters, that I am "unable to correlate the thoughtful opinions of the majority with the statements of the organization which represents them."

I can only fully agree with your opening remarks that the most important problem of modern medicine is the status of the general practitioner. The compilation of this report led Dr. Collings not only to recognize the importance of general practice but also the "danger of continuing to pretend that it is something which it is not." Whether Dr. Collings's report is a true reflection of the whole of general practice is not a point which can be answered by reference to the general health of the people to-day. What is of importance is whether or not general practice is playing its full part with the many other factors, including other aspects of the medical service, which contribute to the level of the health of the people. If this report only emphasizes the worst aspect of general practice then it is still the duty of those who have the dignity and high reputation of our profession at heart to consider it closely. We should indeed be indebted to Dr. Collings for focusing our attention upon this vital problem.

To this end I find your criticism unworthy. I do not see, for instance, how you could pen the sentence, "He really seems most reluctant to find a good word to say for those who patiently subjected themselves to his scrutiny," when Dr. Collings is at great pains not to defame the "overworked and often conscientious doctor who has to suffer the indignities of this way of working." It is also difficult to see how you avoid dealing with the particularly constructive reference to the importance of group practice and health centres.

You say that this report "will focus the medical spotlight on to general practice," yet it seems to me that your leading article, in trying to minimize the importance of the report, can only have the opposite effect. Your remark, "It is much to be hoped that some organization will now set on foot a systematic investigation into the condition of general practice. . . ." cannot be regarded as a call to action by any stretch of the imagination. Yet Dr. Collings calls first for an investigation by those most concerned—namely, "ordinary" general practitioners, with their "breadth of vision" and "latent enthusiasm," who have such a "valuable contribution to make in the whole field of thought on medical care."

It seems to me that we should approach the report in a much more constructive manner, and to this end I would like to make some practical suggestions: (1) that this report be reprinted and

circulated to every doctor in the country; (2) that divisional meetings of the B.M.A. be then called to discuss this report as the basis on which to formulate our proposals to raise the level of general practice; (3) that one object of these meetings be to consider the creation of some mechanism by which the "systematic investigation" of general practice could be conducted; and (4) that ultimately a general meeting be held in London as a sequel to the divisional meetings to consider and implement their decisions.

This report might well be the turning point in the medical history of this country. It is up to the general practitioners to take a lead in establishing that integrated medical service based upon general practice which alone can give a full realization to the high ideals of our calling.—I am, etc.,

London, W.14. I. C. GILLILAND.

SIR,—Dr. Collings's reconnaissance was too brief, and his selection of practices for study not sufficiently representative, but many of us would agree with his two main suggested principles: (1) that as many people as possible should be kept out of hospital, and (2) that the medical care of the patient should be integrated, not fractionated. Indeed, organized medicine in this country is in a top-heavy and precarious state, as the voice of Dr. Ffrangcon Roberts, crying in the wilderness, testifies, and it may be saved only by rapid and vigorous action in support of these principles.

It is certainly true that the structure of general practice before the N.H.S. Act was anachronistic in that, with few exceptions, it continued to be based on the Edwardian structure of society, which, medically, was divided into those who "had the doctor" and those who went to see the doctor. Private consultations at house or surgery were beginning to increase but were still by far the least important part of practice, and the number of daily "private visits" was an index of the doctor's success. The corollary was also true—to "have the doctor" when one needed medical advice was a sign of social advancement and success, as well as having real advantages in establishing a more personal relationship with the doctor.

The surgery continued to exist with so little change, lagging far behind the establishment of the dentist in waiting-room comfort, clerical, and reception staff, and care of equipment, mainly owing to the convention of the private visit. With the coming of the N.H.S. Act, the doctor said to his private patients: "I will accept your cards, but you must understand that in future when you are able to do so you must come to the surgery."

Some have felt this to be unsatisfactory, as indeed it is, and have tried to replace the morning and evening surgeries by a system of appointments, with improved arrangements, thinking that there would be less visits to do than formerly. Some may have believed in the vision of the health centre. Most have had such a greatly increased number of both visits and surgery attendances to cope with that they have hardly had time to think at all.

In the meantime it is also true that the general practitioner's position is being assailed from all sides and by many circumstances. Specialties and specialties within specialties flower and flourish and take away ever more of his one-time responsibilities. Even materia medica, pharmacology, and therapeutics—fundamental parts of his knowledge and craft only twenty years ago—are rapidly disappearing from under his feet, and perhaps neurotic ill-health in the adolescent and middle-age groups, sometimes regarded as his one remaining province, may soon be taken over by the regional psychiatrist's organization.

The public health department no less than the specialist services steadily invade his province and would, if allowed to develop freely, make him quite redundant in time. The medical officer of health sees the health centre as a building housing and integrating all the services and clinics run by his department, with increased efficiency and the addition of "minor ailments clinics" and a field service. From this the general practitioner would be excluded, though specialists would hold clinics there.

In spite of these trends, and paradoxically enough, at the present time the volume of work in general practice has greatly increased.

What are the possible remedies, if it is agreed that the general practitioner is to be restored before it is too late to his position as the central pivot of an adequate service to safeguard the health and treat the ill-health of the community? I suggest the following measures.

1. The maximum number of patients on a doctor's list must be cut down and the capitation fee raised in proportion. The extent to which this is possible is an actuarial problem, but the principle should be rather that it is difficult to get on the list of a good doctor than that there should be wide "free choice." The doctor must have time both for recreation and to attend rounds or clinics which interest him and from which he is now debarred more by lack of time than lack of facilities.

2. Much improvement in organization must come from the doctors themselves. The "surgery" is an archaic phenomenon and should be replaced by appointments. Emergencies can always be fitted in. I asked my N.H.S. dentist for an appointment in January and was given a date in April. I believe that my toothache was just as urgent, uncomfortable, and dangerous as the symptoms of half the 30 or 40 people waiting in the doctor's surgery up the road. Arrangements whereby one or more members of a partnership or group accept emergency calls at certain times, in turn, are often sketchy and sometimes quite lacking. An arrangement of this sort is much better than the conventional half-day off: freed from emergency calls, the day can be planned.

3. Hospital out-patient departments should assume their proper function, especially on the medical side, of giving expert opinion and advice instead of collecting and observing cases. Patients should be seen only by appointment given at the request of their doctors, to whom reports should be sent promptly. They should then be discharged and seen again only if a fresh appointment is requested by the doctor. The follow-up system, with its train of ever-increasing investigations, should be limited to departments specially devoted to research. This is more revolutionary than it sounds, and would produce a considerable unemployment problem among registrars and hospital ancillary staffs, but an economy axe on consultant appointments appears to be inevitable, and the unemployment would come later anyway.

4. Finally, if it is agreed, as surely it must be, that the health centre is but a fading vision, more help is needed for the increasing numbers of young doctors, many of whom have special skills and valuable postgraduate experience, wishing to start general practice. The number of these will increase, as it becomes more obvious that the majority of them will not obtain specialist appointments. They will need help in starting and perhaps, too, help in capital equipment.

My own experience of resident appointments, seven years' general practice, six years in the R.A.M.C., and three years of hospital and consultant practice lead me to think that until present trends began their work of frustration and disintegration general practice was both the most difficult and the most satisfying branch of medicine.

Dr. Collings's blunt generalizations will do little to restore present public confidence in the general practitioner, and will not please the doctor who, with a family to bring up and educate, has wearily accepted the idea that to earn a sufficient income he must do so much work that it is impossible to do it properly. But they may stir such bodies as the General Medical Services Committee into renewed thought and action in time, and, if so, he will have done us a considerable service.—I am, etc.,

Bracknell, Berks. J. J. KEMPTON.

SIR,—Following the publication of the Collings report in the *Lancet*, there has been a good deal of favourable and unfavourable comment both in your columns and elsewhere. The general impression would appear to be one of some conviction that Dr. Collings has at great length stated a sound case. That his conclusions may be hurtful to our national professional pride is no excuse for turning a blind eye.

Dr. P. R. Kemp (April 8, p. 841), in demanding an immediate investigation on an adequate scale, proposes that the British Medical Association is the appropriate organization to initiate this. I suggest that the question of the whole future of general practice is of such importance to the nation and the profession that an inquiry on the level of a Royal Commission is justified

and indicated. Neither a B.M.A. nor a departmental committee would fill the bill. The points requiring immediate attention are these:

1. Closure of the gap between hospital and general medical services—i.e., by integration of controlling committees and councils, provision of G.P. beds, clinical posts for G.P.s, etc.

2. Reduction of panel lists to a maximum of 2,500 or possibly less, with due regard to maintenance of adequate remuneration. As a corollary, retrenchment in all other branches of the service, especially dental, ophthalmic, and clerical, is essential.

3. Encouragement of group practice and health centres as a top priority. Existing buildings should be adapted and responsibility for establishment vested in the executive councils instead of disinterested local authorities.

4. Removal of all restrictions on practice.

5. Appreciation of the true importance of public relations. There is a good deal of dirty linen to be washed; no harm will come of doing it in public provided determination exists that the finished product shall bear inspection.

Finally, this is not a question of party politics. It is a matter of urgent national interest demanding drive and action of a type which the bureaucrat may find it difficult to initiate. Our official representatives and medical M.P.s should see to it that such action is taken.—I am, etc.,

Folkestone. G. J. V. CROSBY.

Rheumatoid Arthritis

SIR,—The Empire Rheumatism Council is doing good work on which it is to be congratulated. The report (April 8, p. 799), by its Scientific Advisory Committee on the institution "of a controlled investigation which would confirm or refute allegations that various factors were of aetiological importance" in rheumatoid arthritis, is less worthy of praise.

I agree with the statements in the final paragraphs of the report that "this carefully planned and time-consuming study clearly demonstrates the danger of the acceptance of uncontrolled clinical impressions too readily and the need for controlled investigations which can withstand critical statistical analysis," and that "negative findings have a real value if research is directed away from unfruitful fields into the investigation of more fundamental problems." But I submit that even the uncontrolled clinical impressions of any one of its members would be of more value to medicine, the sick man, and the solution of problems of rheumatism than are the critical statistical analyses compiled by this committee, and that the conclusions drawn, being based on inadequate information, are wrong and harmful. In support of these accusations I will quote from and comment on only four of the aetiological factors reviewed.

The patient and the controls were asked "a series of questions relating to events occurring before the onset of arthritis that might be expected to produce psychological disturbances." The statistics showed that psychological factors played no "important part" in the aetiology of rheumatoid arthritis. "The height, weight, and chest circumference (at the xiphisternum) in both inspiration and expiration were recorded at the medical examination of the persons interviewed." The statistical evidence showed that there was no relationship between body (anthropometric) type and rheumatoid arthritis. The patients and the controls "were asked ten questions" about the homes in which they lived. Home conditions were found to be of no aetiological importance in the causation of rheumatoid arthritis. Under the heading of "Focal Sepsis" the report states that "the data . . . were collected by a number of doctors whose views on what deviation from the normal should be accepted as pathological would differ greatly . . . the significance (of focal sepsis) as an aetiological factor remains in doubt."

Even if some of the medical registrars employed in following up the questionaries, which were said to take three or four hours to complete, were young men inexperienced in the study of the rheumatic patient they were at least asking questions which are included in the general training of the medical student. But even then the significance of focal sepsis "remains in doubt." The asking by them and the recording of the answers to a few simple questions relating to events occurring before the onset of arthritis that might be expected to produce psychological disturbances were sufficient for the committee to exclude psychological factors as being of aetiological importance—a view at variance with that of individual observers in every country. A weighing machine and a tape measure in their hands were sufficient to classify the different anthropometric types and to satisfy the committee that there was no relationship between body build and rheumatoid arthritis. This brushes aside the painstaking work by Draper and Sheldon in America and by Tanner in this country. The answers to ten questions put to the patients on their home conditions enabled the committee to exclude social factors as being of aetiological significance. This suggests that there has been no need for a home visit by the almoner, which in the experience of some of us usually presents a very different answer to this question.

This report is not only unworthy of the eminent medical men who composed the committee that produced it; the evidence presented and the conclusions drawn may well mislead the young investigator or, worse, those from whom he is asking money and facilities for the initiation and maintenance of his research.

I believe "a controlled investigation" can be of true value in the investigation of rheumatism. May I ask that the lesson taught us by this committee be not lost but added to those that we have learnt from "controls" in other fields. The Council or some other body, possibly the Nuffield Trustees, should be asked to repeat this experiment with the help of experts in other fields. Those who are eminent in the realms of psychosomatic, constitutional, and social medicine should be invited to join the physicians who are interested mainly in rheumatism and answer once again the questions properly asked by the Empire Rheumatism Council.—I am, etc.,

London, W.1. FRANCIS BACH.

SIR,—It would be a pity if the findings of the Scientific Advisory Committee of the Empire Rheumatism Council (April 8, p. 799) should act as a deterrent from further research on psychological factors in rheumatoid arthritis. The Committee's "questions dealt with events such as death, accidents, or serious illness in the family, economic embarrassment, broken engagement, or unhappy married life," but it has entirely ignored individual differences in reaction to such events, which would not have been easily reduced to statistics. In the last few lines of the revelant paragraph the Committee seems to equate "traumatic event" with "psychological factor," and, although it does insert a saving clause at the very end, it is liable to find itself misread. And misread it has been by no less a person than the writer of your leading article (p. 826), who translates its remarks as meaning that "there was no higher incidence of *psychic stress* as a participating factor in the patients studied than in the control group" (my italics). Attempts to dissociate the patient from his environment are bound to lead to this sort of confusion. The Committee has not really concerned itself with psychological events at all.—I am, etc.,

Edinburgh. A. B. HEGARTY.

SIR,—Your leading article (April 8, p. 826) commenting on the Empire Rheumatism Council's report on rheumatoid arthritis (p. 799) states that the findings conflict with the view that rheumatoid arthritis is a stress disease or disease of adaptation because there was no higher incidence of preceding emotional stress, infection, or allergy in rheumatoid patients than in controls. Such a conclusion from this data is surely not justified. During the war many people experienced the same bombing, but only some developed nervous or psychosomatic disorders. Studies have shown that the dose of emotional stress is of relatively minor importance compared with the predisposition or resistance of the individual. Therefore deductions such as that quoted appear to be too superficial.

It would have been valuable if the report had given complete numerical and diagnostic details of the controls, particularly as hospital patients are automatically a selected group and do not necessarily represent the general population. Was any other class of patient included other than those with hernia, fracture, or injury? I had heard that cases of acute appendicitis

may have been used, and personal experience in collection of controls suggests that stress factors may be important in this disease.—I am, etc.,

Ipswich, Suffolk. J. W. PAULLEY.

SIR,—It must have been disappointing to the members of the Scientific Advisory Committee of the Empire Rheumatism Council that, after the large number of carefully controlled investigations carried out by so many experts, they were able to produce largely negative findings only in their report on rheumatoid arthritis (April 8, p. 799). These, of course, are useful, as the report indicates, from the point of view of unfruitful lines for further investigation.

It seems, therefore, that so long as the cause of rheumatoid arthritis remains unknown clinicians must depend on hypotheses. This report does not give figures relating to the incidence of the commonly recurring nasopharyngeal infections during the course of the disease compared with controls. My impression (and impressions can be most misleading) is that rheumatoid arthritics do not suffer from the common cold to the extent of the normal.

If the hypothesis that rheumatoid arthritis is due to an abnormal response of certain tissues to bacterial products is correct it would not necessarily follow that allergic manifestations in general would be more frequent in rheumatoid arthritis.—I am, etc.,

Redhill, Surrey. L. J. BARFORD.

"Disprin" Tablets

SIR,—May I please draw your attention to the full-page advertisement appearing in the issue of the *Journal* of January 7 on p. 9, wherein it is stated: "When placed in water 'Disprin' tablets yield a solution of calcium aspirin which is neutral and palatable"?

My attention has been drawn to this statement by a number of persons since January, 1949, when I received direct from the makers (as did many others) samples of the tablets, and I should explain that my name is given as a reference in the pamphlet issued in the form of a brochure included in each carton containing a bottle of "disprin" tablets. (The reference is to work published by me on the subject of calcium aspirin.)

I have now examined "disprin" tablets on a number of occasions (since January, 1949) and on each and every occasion the tablets when placed in a small quantity of water—in accordance with the directions enclosed with each bottle—have yielded an acid solution, and not a neutral solution as stated in the advertisement above cited. (The *p*H of the solutions is approximately 4.5.) A glance at the illustration in the advertisement shows that the label on the bottle is worded "Disprin—neutral soluble aspirin." These tablets are a mechanical admixture of aspirin, chalk, and citric acid—together with starch as a burster in the proportion of aspirin 5 gr. (0.32 g.), starch 3 gr. (0.2 g.), etc. The starch of course is insoluble, and the citric acid, being in excess, makes for the resulting acidity.

I suggest that the advertisers justify their claims in this respect.—I am, etc.,

Hendon, N.W.4. M. COPLANS.

Morphine in Acute Chest Infections

SIR,—Not long ago I gave an injection of morphine to a patient suffering from bronchitis and asthma exacerbated by a recent attack of influenza. The intention was to ease his breathing and at the same time to give him a good night's rest—instead of which he collapsed and died within four hours. In mentioning this to colleagues, I discovered that three of them had had a similar experience within the past month. All of them had administered morphine by injection for patients with chest symptoms and in no case was the patient regarded as moribund—in fact one patient had been out shopping less than 12 hours before—yet in each case the patient quite unexpectedly died within a few hours of the injection.

Now if this can be the experience of four doctors in one small town in a single month, it seems to me that the number of deaths which may be occurring from this cause all over the country may well be considerable, though at present we may be largely unaware of it and do not seem to be sufficiently alive to the danger of giving this drug in acute chest infections. The reason for this unawareness is due in part to the fact that we do not normally care to advertise our mistakes, and the injection does not, therefore, figure in our certificates of the cause of death; nor are we inclined to talk very much about it to others. It would be extremely difficult, if not impossible, to discover just how many avoidable deaths occur from this cause, but I believe they are sufficiently numerous to justify this warning and to ventilate the whole question.—I am, etc.,

T. G.

Antihistamine Drugs and the Common Cold

SIR,—In your excellent comment on antihistamines as a "cure" for the common cold (April 8, p. 828) you have struck a cautious note in stating that "in addition to the mild sedative and gastro-intestinal side-effects so commonly experienced after taking these substances a number of serious and unusual reactions have now been recorded."

While we are all eagerly awaiting the results of the Medical Research Council's investigation of the subject, one question, I think, arises: is it not the sedative effect of the antihistamines that brings about the recently published "abortive cures" of this condition? It is common experience that any mild sedative taken at suitable intervals in the early stage of the common cold will have a soothing effect on the acutely inflamed nasal and sinusal mucosa.

A few years ago some of us used to prescribe codeine phos. and papaverine hydrochlor. aa gr. ¼ (16 mg.) to be taken five times daily during the first 48 hours of a developing cold. (It is worth noting that papaverine, in addition to its sedative effect, has similar vaso-regulating properties to the antihistamines.) This simple compound kept the patient free from sneezing and rhinorrhoea for 3 to 4 hours and more often than not "cured" his cold.

Since the idea of treating the common cold by antihistamines emerged, I have given trial to both methods in a limited number of cases, including myself. I have so far failed to discover any appreciable difference in their relative merits as palliatives or curatives. I must admit, however, that the number of my trial cases is too limited for final conclusions to be drawn.—I am, etc.,

Bath. E. GLATZ.

Anaesthesia for Fenestration Operation

SIR,—As the surgeon concerned it has been most interesting to read the correspondence evoked by Dr. Brenda G. Hutchinson's original letter (February 18, p. 436). Some of the remarks and suggestions merit comment.

I was surprised to see that Dr. Stanley A. Mason (March 11, p. 609) stated that with gas–oxygen–trichlorethylene anaesthesia he found "troublesome bleeding" occurring in about 33% of cases. That certainly has not been our experience. We have even fenestrated successfully and with comparative ease in a case with moderate hyperpiesia and in another with advanced Paget's disease. Labyrinthine disturbance is, in our experience, minimal and largely obviated by extremely smooth and gentle handling of the patient on the way back to bed, fixation of the head for the first two post-operative days, and the judicious use of phenobarbitone—while the administration of pre- and post-operative intramuscular penicillin in all probability plays a part.

Dr. James Montgomerie (March 25, p. 730) advocates collapsing the veins to reduce congestion by tilting the table till they are anything from "a few inches above the manubrium" to a position of "considerable elevation." What he does not tell us is the position of the surgeon. Is he standing on his head or suspended bat-like from the ceiling? Except he be in some such position it is difficult to see how he can possibly fenestrate by any of the recognized techniques on a patient "tilted to a considerable elevation" as suggested. All that is, in point of fact, necessary is to place a medium-sized sandbag under the patient's head.

Dr. Montgomerie again refers to a "nervous tense patient" as being a factor contributing to congestion. I quite agree. Our practice is to give the patient, on admission, notes regarding

post-operative treatment and his or her probable sensations (i.e., vertigo, etc.). We find that this, and contact with other patients in the wards who have already undergone the operation, go a long way to removing all nervousness, and adequate premedication does the rest.

In conclusion, I find that gas–oxygen–trichlorethylene anaesthesia provides a patient who is breathing quietly and evenly in a light plane of anaesthesia and who remains motionless throughout all stages of the operation without congestion or straining. It is an easy matter to secure a bloodless field; and if at any stage there is oozing from a cut bone surface the application of a gelatin-sponge stamp brings this under immediate control, so that the actual fenestration is performed in a gin-clear saline-adrenaline stream. *Experientia docet.*—I am, etc.,

Salisbury. C. A. HUTCHINSON.

Erysipeloid of Rosenbach

SIR,—The article by Mr. Martin A. Goodwin on erysipeloid of Rosenbach (April 1, p. 765) greatly interested me, because in the last twenty years down here we must have had at least twelve similar cases a year; but, in my ignorance, I did not know the condition had the dignity of a name. I thought it was just a local infection with a mildly virulent streptococcus—i.e., one of the variants one so often gets from "textbook" conditions. As in those "good old days" a G.P. could be on the staff of his local hospital, it was soon found out that the quickest and easiest way to cure it was: (1) keep dry, at rest, and warm, with dry dressings; (2) a short course of short-wave therapy. This treatment generally cured the trouble completely in about a week at most. No sulphonamides or penicillin were ever used.—I am, etc.,

Hayle, Cornwall. W. H. PALMER.

Herpes Zoster Treated with Vitamin B_{12}

SIR,—After reading last year of the treatment of herpes zoster by injections of liver extract, I decided to try the new preparations of vitamin B_{12} concentrate, when this became generally available a short time ago. Since then I have had an opportunity of treating six cases and the uniformly excellent results obtained stimulate me to publish this as an invitation for further field experiment. The stages of the disease at which I instituted B_{12} therapy have varied from the early intense erythema before vesiculation to a case of a heavily secondarily infected herpes zoster with a great deal of underlying cellulitis. I have not yet been able to try this treatment in a case of post-herpetic neuralgia. The scheme of treatment in all cases, quite arbitrarily, has been the intramuscular injection of 2 ml.—absolutely painless, incidentally, unlike liver—of the concentrate on the first, second, and fourth days of treatment. Marked clinical and objective improvement followed upon the first injection, no further lesions appeared, and by the end of the first week all local signs had disappeared. In only one case was one injection of "pituitrin" (0.5 ml.) necessary on the sixth day to clear up some residual neuralgic pain. Unaided sleep was possible after the first or second injection, and only rarely were analgesics required at all. These results are interesting, I think, and I should be glad to hear of the experience of other doctors in this field.—I am, etc.,

West Bromwich. K. E. JOLLES.

Development of Psychological Medicine

SIR,—If I may further trespass upon the hospitality of your columns I should like to reply to Dr. W. A. O'Connor's letter (February 18, p. 441) in which he launches a rather acrimonious assault on my communication (January 21, p. 182). The purpose of my original letter was not to attack Freudian theories, still less Dr. John Rickman's masterly exposition of it (January 7, p. 30). It was intended to be a criticism of the latter's article in so far as I considered the author dealt with merely one facet of psychological medicine, and was therefore misleading to the non-psychiatric practitioner. I am accused of using a plethora of "perhapses." Only a charlatan will dogmatize on incomplete facts. I respect scientific logic and practice, even if the Freudians consider themselves above it.

The serious implications of Dr. O'Connor's statement should not be obscured by its egregious absurdity. It exposes the dangerous and microscopic insularity of the Freudian devotees. Purves-Stewart puts it well in his book, *Diagnosis of Nervous Diseases*: "To its followers Freudian doctrine is a mystical, phallic religion. . . . The Freudian psychologist discovers practically everything he wishes to discover. He has the advantage over ordinary scientific workers of not being required to prove the truth of his fantasies or of submitting them to control by independent observers." Actually the psychology of the Freudian psychologists is even worse than that. They wish to impose a dictatorship over scientific thought and to bludgeon their opponents into silence. Dictators, or even pied pipers, have no place in the scientific world.

In Eire our mental hospitals are painfully full. No doubt in more enlightened countries the application of Freudian theories has resulted in the complete eradication of the psychoses. Or is it rather the truth that Freudian hypotheses have been a complete and absolute failure when applied to the psychoses? I have stated that, and I reiterate, all the evidence points to the fact that the psychoses are due to organic dysfunction. If Dr. O'Connor denies this then he must never have read, or if read not have understood, the significance of the work of Gjessing, Gildea, Cori, Peters, Richter, Mann, Quastel—to mention but a few of the brilliant research workers whose names immediately spring to mind. I must make special mention of the work of Winifred Ashby, in America, on carbonic anhydrase in the brain, and especially her concept of the fourth dimension in cerebral enzymic function. This concept of what I may call "cerebral fibrillation" adds more to the elucidation of insanity than all Freudian theory has done in more than fifty years. Her concept dovetails beautifully with the numerous biochemical anomalies so clearly demonstrated in the psychoses and which, in my opinion, are due to production of abnormal urea acting like ordinary nitriles—cyclic changes being due to switching of the mode of urea production.

Freud may tell us, and correctly for all it matters, what is wrong with the music of the "cerebral radio," but Freud failed to realize that he was merely trying to explain defective function in terms of "musical forms," forgetting that the defect might lie with the conductor or with the broadcasting station itself. Freud may (or may not) have been an expert violinist, but that is no substitute for the "radio mechanic."

I trust Dr. O'Connor's views are those of the minority of psychiatrists. At least let us hope so. Until we realize that only by the co-operation of every worker in every branch of science, until psychiatrists realize that they have no prescriptive right to erect a "Trespassers Prosecuted" sign over their specialty, until biochemists and physiologists realize that psychiatry is a vast unexplored metabolic wilderness, until the Freudian scarecrow is seen for what it is, until then will psychiatry stand still.—I am, etc.,

Cork, Eire. ROBERT A. MACCARTHY.

*** This correspondence is now closed.—ED., *B.M.J.*

"Biochemical Lesions"

SIR,—Dr. William Hughes, in his paper on deficiency patterns in metallic poisoning (March 18, p. 634), describes several clinical entities thought to be due to biochemical lesions, the cause of which is postulated as an interference with the pyruvate-oxidase enzyme system. This system is shown to consist of thiamin pyrophosphate linked with a sulphur-containing protein, the latter being susceptible to poisoning with a heavy metal. Various cases are described, among them one of gold poisoning—with the typical lesions of angular stomatitis, sore, depapillated tongue, and flexural seborrhoea. Dr. Hughes observed that exposure to sunlight caused a relapse, with recurrence of symptoms, and suggested that sunlight may create a need for extra supplies of the compound enzyme.

Recently a number of cases have come to my notice of patients showing an idiosyncrasy to penicillin and the sulphon-

amides. Some mild cases have shown merely a sore, depapillated tongue, and others have also had a seborrhoeic rash with a very similar distribution to that of the cases described by Dr. Hughes. It had occurred to me that the mechanism of this drug reaction might possibly be the poisoning of such an enzyme system. It was therefore particularly interesting to read Dr. A. I. Suchett-Kaye's article (March 25, p. 704) on the secondary syndrome of chemotherapy. He refers to Wedum's theory of the linking of sulphonamides with plasma proteins, forming specific antigens, and describes a case of sunburn treated locally by a sulphonamide preparation. The resulting dermatitis was healed by treatment with sedative lotions, but flared up following the systemic administration of a "sulpha" drug. It might be interesting to see the effect of a course of dimercaprol in such a case. I wonder whether this has ever been tried?—I am, etc.,

Liverpool, 9. DOROTHY C. PETERSON.

Identification of Tablets

SIR,—The greatly increased use of tablets for accurate dosage, greater convenience, increased palatability, and many other reasons, together with the unlimited scope of prescribing and entire freedom to the public of cost, is giving rise to many new and growing problems. The public is rapidly acquiring the tablet habit, and almost every house has its medicine chest or bathroom cupboard filled with aspirins, sleeping tablets, iron tonics, phenobarbitones, sulphonamides, and a host of aperients, while reducing tablets, both yellow and grey, decorate my lady's dressing table, alongside the red, yellow, or blue hypnotic capsule.

What happens to the surplus when treatment ceases? How long can anyone, including the patient, nurse and doctor, positively identify the tablet when the cardboard box has burst or the label become obliterated? Tablets crumble, shapes wear and alter, even colours fade. A number 19 may look like 9 or even 6. As police surgeon, one often sees cases of coma or death with tablets alongside the patient. Generally the boxes are not capable of quick identification. To the naked eye there is little difference between the yellow aspirins, hypnotics, and D-amphetamine tablets. Confusion becomes greater when different firms and drug houses produce different colours and shapes for the same tablet, notably aspirin and ferrous sulphate. Stark tragedy occurs when young children mistakenly swallow tablets carelessly left within reach which resemble sugar-coated sweets or coloured cachous.

In the interests of national economy the Formulary Committee naturally wishes to reduce costs on proprietary preparations, indicating the exactly equivalent substance with *Formulary* title and cheaper cost. This policy, while laudable to the pure scientist, implying as it does the simplicity of shape, design, and colour (white), strikes deeply at human psychology. How many doctors have not met the patient who wants the yellow reducing tablet, red sleeping tablet, green iron tonic, or blue or pink capsule? What is to be the outcome of the strife between pure science and cold logic on the one hand and freedom to prescribe on the other?

The adoption of uniform colouring (white) means greater complications from the point of view of identification. However, the times are propitious for wide study by members of the profession as well as pharmacists and manufacturers on ways and means of quick identification. Changes can be rung on sizes, shapes of moulds, types of covering, etc., but perhaps the greatest advance would be to produce a suitable vehicle or bonding agent in tablets which will stand friction and vibration without crumbling or fracture or absorbing moisture—one which will enable the tablet to retain indefinitely the letters and numbers embossed upon it by the mould.—I am, etc.,

Walsall. A. BENTLEY DAVIES.

Split Second Sound at the Pulmonary Area

SIR,—The significance of a split pulmonary second sound merits further investigation. It was stressed to most of us as students as a significant finding in mitral stenosis, but little if any attention has been paid to it in the absence of any other evidence of mitral valve disease. It is a very common finding in young people, and, indeed, if it is kept in mind at auscultation its absence is more unusual than its presence.

Dr. Maclean and I have already remarked on its prevalence in the absence of any discoverable clinical abnormality.[1] Many medical students are able to appreciate this finding on clinical examination of the heart and they offer it as evidence of cardiac disease. I have little doubt that as an isolated finding it is not of pathological significance in young people. Such an opinion is based on the fact that it is so frequently present in the absence of other signs of disease, and on the follow-up over a number of years of individuals showing it no other evidence of cardiac disease has developed. I believe that the non-significant aspect of the split pulmonary second sound, at any rate in the young, should receive wider notice and should be stressed to medical students.—I am, etc.,

Glasgow. A. S. ROGEN.

REFERENCE

[1] *Brit. Heart J.*, 1949, 11, 264.

Persistent Hiccough

SIR,—In view of the recent publicity given in the lay press to hiccough as a clinical entity I should like to record my experience with such a case during the past year. The case history is as follows.

A man aged 40 years for no obvious reason developed hiccough, about one every two minutes. He admitted having eaten some oysters within the previous 48 hours, which article of food appeared to have caused violent sickness lasting a few hours, but which had completely subsided when hiccough commenced. In view of the history, however, I advised fluids only and glucose and hydrarg. cum crete. Twenty-four hours later no improvement had resulted. Hiccough was now in its eighth day, but sleep so far had not been interfered with. On the advice of a medical colleague I now prescribed amyl nitrite capsules. The first capsule inhaled broke the spasm for 12 hours. With repeated use of the drug, however, the patient became tolerant of it, until finally it had no effect whatever. The hiccough was now in its tenth day and was much more frequent, about four a minute, and sleep was being interfered with. I now referred the case to hospital.

The patient was seen at the Middlesex Hospital and no cause was found for the hiccough. A sedative was prescribed (I think phenobarbitone), and admission to hospital advised, but the patient refused. The sedative gave 6–8 hours initial relief, but once again the interval of relief from hiccough diminished with repeated usage of the drug. It was now the 11th–12th day of hiccough and no sleep whatever had been obtained. I now decided to try pethidine in this case. I have had a great experience of this analgesic and antispasmodic in the field of obstetrics, so I felt it was worthy of trial. I prescribed an initial dose of 200 mg. orally, and in 55 minutes the hiccough ceased and a continuous night's sleep was obtained from 11.30 p.m. to 5 a.m., when hiccough once more returned. A further 100 mg. was given and relief was again obtained, this time lasting some 12 hours. Again I prescribed 100 mg. pethidine and a dose of the hospital sedative, and a second continuous night's sleep was obtained. There was no further recurrence of hiccough, but the patient, who had remained ambulant throughout the treatment, was forced to remain in his bed complaining of drowsiness, slight sickness, and depression.

It is of interest in this case to record that about ten years ago he had had an attack of hiccough following ingestion of hot soup, which attack lasted some 4–5 days. This attack passed off during sleep and never reached the severity of the present one.—I am, etc.,

London, S.W.5. BEDELIA GALLEN.

The Granny Racket

SIR,—The colloquial approach in public statements made by medical men seems to be becoming fashionable, but it is feared that the spirit of "Granny" has led Sir Heneage Ogilvie (March 25, p. 683) along a path of facile and casual generalization and that in his gallant attendance he has mislaid his sense of logic. Doctors, he tells us, who advise Government departments are dangerous. If they have spent their "whole life" in Government service they are dangerous, and if they have long endured the "delights and despondencies of practice" before becoming Civil Servants they are not only dangerous but in addition are "eloquent opportunists." Possession of many letters, which Sir Heneage points out does not necessarily make a good doctor, shares with the coat and the office chair the inability to make

the man, but Sir Heneage, denying both sartorial and physiological opinion, claims that the man takes the shape of his coat. Had he referred to the advice, if any, given by Government medical advisers as to the demands which might be expected to be made on the medical and ancillary service under the N.H.S. Acts he would have had a stick of exceptional weight with which to belabour the medical Civil Service, since any experienced general practitioner could have told the Minister that the estimate was fantastically erroneous.

If I may end on a personal note, as an inconsiderable new boy whose past and future tenure hardly entitles him, though in the Service, to regard himself as of the Service, and who can therefore take an objective view which his age and experience entitle him to hold and express, I would say that I have been deeply impressed by the penetrating vision, open-mindedness, and thoroughness of the senior medical Civil Servants and the robust common sense and professional soundness of the less exalted. Though an entrant with long experience of practice, my only connexion with eminence is to salute it wholeheartedly and not least the eminence of Sir Heneage Ogilvie. It is because an injustice appears to be done that I take up a lazy pen in protest.—I am, etc.,

London, W.9. T. J. TAUNTON.

SIR,—You state in a leading article (March 25, p. 714): "In this week's issue Sir Heneage Ogilvie takes up the cudgels on behalf of British medicine when he gives the retort courteous to Mr. Stassen." Perhaps we differ as regards our ideas of the retort courteous, but I can hardly think the president of the University of Pennsylvania would like to be told that he pays little more than lip service to veracity and that his articles encourage the American reader to thank God that he is not as other men are and to turn over again and go to sleep.

It also strikes me as rather presumptuous for a nation in receipt of American charity to presume to advise its financial father how to conduct his business. Rather like the prodigal son returning home to tell his dad what a grand time he has had in his fool's paradise where everything is free. But dad knows better. He knows that things are only free in Britain because he has paid good dollars for them in America.

If Sir Heneage Ogilvie had any experience of geriatric practice to-day he would recognize that "Granny is Gone" in the *Reader's Digest* of February was essentially true. Three of the most valuable therapeutic weapons for dealing with the aged are kindness, courtesy, and consideration. Since the advent of the National Health Service they have all but disappeared, and that is why many a granny longs to be gone, and quite a few have told me so.

America is a land not rich in philosophers, but it did produce William James, who wrote in his letters: "The bigger the unit you deal with, the hollower, the more brutal, the more mendacious is the life displayed." It is a pity that Granny had to appear as Aunt Sally for some of us to recognize the truth of the remark.

Logan Pearsall Smith was another distinguished American, who became a naturalized Englishman early in the first world war—when England was still a land of freedom and when such an action was worth while. Pearsall Smith was an individualist and a Quaker who knew the Quaker text, "One, with God, is a majority." I would remind Sir Heneage of his aphorism in *All Trivia*: "The charitable attempt to disguise the smell of a bad egg only makes it worse."—I am, etc.,

Glasgow, C.3. A. C. GORDON ROSS.

Foetal Loss in Breech Presentation

SIR,—I was interested to read the article on this subject by Dr. T. F. Redman (April 8, p. 814) in which he drew attention to the fact that, in a series of 243 breech deliveries in hospital, the foetal mortality for multigravid births approached the figure for primiparous patients. While I feel that his figures might not be universally re-echoed his article has stressed some of the inherent dangers and should stimulate obstetricians to be as assiduous in the elimination of the multigravid breech as they are in the correction of the primiparous breech presentation. So often, it seems, the fact that a woman has delivered herself—assisted or unassisted—of a previous vertex presentation is taken as an indication that all will be well, and, failing one or two attempts at external version in the antenatal clinic, no further steps are taken.

Baxter[1] discussed recently some points which are relevant to the problem. He showed that the frank breech of the primiparous patient more than sufficiently dilates the cervix to allow the unhindered passage of the well-flexed after-coming head. The flexed breech, and particularly the footling presentation, of the multipara, however, might traverse a cervix not yet fully dilated with subsequent cervical dystocia of the after-coming head. This author also demonstrated convincingly that the obstetrically important diameters of the well-flexed foetal skull varied insignificantly over a wide range of birth weights, but that deflexion of the after-coming head, particularly the larger foetal head, was the cause of cephalo-pelvic disproportion. The babies of multiparae tend to be larger than those of primiparous patients, and such an infant, in the process of birth through an incompletely dilated cervix, might well suffer extension of its arms. Such extension *per se*, and certainly the manipulations necessary for its correction, could very easily lead to deflexion of the head with consequent brim or outlet dystocia.

In dealing with delay of the after-coming head, it is agreed by many that the application of forceps assures a smooth, controlled delivery at the outlet and allows of the construction of an airway for the foetus; and at the actual moment of "crowning" the forceps provide protection to the foetal head from the effects of sudden decompression. In my experience no other method is so constantly attended by these advantages. In his article Baxter has demonstrated yet another advantage—namely, that properly applied, and with correct axis traction, forceps delivery maintains flexion of the after-coming head.—I am, etc.,

Bristol. JEFFERY SPRY LEVERTON.

REFERENCE

[1] *J. Obstet. Gynaec. Brit. Emp.*, 1949, **56**, 95.

Uterus Didelphys with Unilateral Gynatresia

SIR,—I was interested in Mr. Mostyn Embrey's report (April 8, p. 820) of a case of uterus didelphys, in which he points out the extreme rarity of such a condition when associated with unilateral atresia and haematocolpos. I published such a case in 1935,[1] and as I have had the opportunity of examining and treating the patient from time to time ever since my original operation it may be of interest to your readers to hear of the end-results.

In 1918 I was asked to see the patient, a girl of 12½ years, who complained of severe dysmenorrhoea, abdominal tenderness, and vomiting. Her temperature was 100° F. (37.8° C.) and pulse 100. On examination I found the tenderness more marked on the right side. She had already had three menstrual periods, somewhat profuse, but the present one, which had started the day before, was excessive. Rectal examination disclosed a low pelvic tumour about the size of a grape-fruit. I decided to operate, for the diagnosis seemed to lie between appendicitis and haematocolpos, but the three normal periods made one hesitate to diagnose the latter. On examination under the anaesthetic I found haematocolpos on the right side, the septum bulging towards the left. The left vagina was carefully dilated and a separate cervix found which was functioning normally. I therefore dissected away the septum, and this was followed by a flow of about 8 oz. (227 ml.) of dark, black blood. A few catgut stitches were inserted through the fold of mucous membrane between the two cervices to stop the haemorrhage and the fluid was allowed to drain away slowly. The patient made an interrupted recovery.

Thirteen years later I had occasion to examine the patient under an anaesthetic, as she was suffering from dysmenorrhoea and some menorrhagia. I found a wide vagina, two cervices, and the remains of the base of the vaginal septum. The right cervix was caught up to the right wall and admitted the uterine sound for only 4 cm., and there were no curettings. The left cervix was more central—the length of the cavity being 6 cm. and the curettings normal. The uterus was broader than usual and about the size of a three-months pregnancy. In 1939 the patient married, but soon afterwards consulted me because of an

abdominal tumour and some menstrual irregularity. I operated and found an ovarian cyst on the right side, and I also removed the appendix. I had not ruled out the possibility of an ectopic pregnancy. It was interesting to have the opportunity of seeing the double uterus, with a deep indentation along its upper border. Three years after this she had a normal confinement. The baby weighed 6¼ lb. (2.9 kg.) and was healthy.

In my case, unlike that of Mr. Embrey's, there was no other congenital abnormality of the genito-urinary tracts.—I am, etc.,

London, N.W.8. L. MARTINDALE.

REFERENCE

1 *Lancet*, 1935, 1, 1389.

Chlorosis

SIR,—I feel it interesting that recently (in the industrial practice in which I work) I have seen no fewer than 14 cases of the haematological condition of chlorosis, which according to the experts had practically disappeared. The average age of the patients was 18. All but two had extremely sallow complexions. Loss of weight with associated anorexia was prevalent, but particularly interesting was the fact that every one of these 14 girls complained of dysmenorrhoea. I doubt, frankly, that this was coincidental, because I feel that there is a relationship between these two conditions. Constipation and frequency of micturition were two cardinal features in the majority of the 14 cases, but breathlessness was uncommon, and only five patients actually gave this as their first complaint. Lassitude was always present, while oedema of the ankles could be seen in only two cases.

Seven of the girls were employed in a laundry, three were dance-hall usherettes, one a waitress, three were shorthand-typists, and 12 of the 14 were heavy tea drinkers and smoked 15 cigarettes a day on the average. They kept late hours and had irregular meals. In spite of the healthy town and its environs, these girls, on their time off, did not take advantage of their birth-place, but instead frequented their local picture palaces and dance halls.

Blood examination revealed, on the whole, the typical picture of a microcytic hypochromic anaemia. In three cases the R.B.C. count was as low as 2.75 million/c.mm. Examination of the cardiovascular system revealed extrasystoles in 50% of cases, and in nearly all tachycardia was prominent. Respiratory system examination revealed nothing of particular note, except one case had acute pulmonic phthisis. In the digestive system, in 60% of cases there was a marked degree of gastritis. Halitosis and carious teeth, with pyorrhoea in three cases, were noted. Urological investigations revealed orthostatic albuminuria in six cases. The central nervous system showed little or no abnormality.

After diagnosis was completed active treatment was undertaken with ferrous sulphate tablets (2 t.d.s.) and dilute hydrochloric acid, 1 dr. (3.5 ml.) in half a tumblerful of water, sweetened with lime. Repeated blood counts were done, and in eight cases, after a few weeks, marked improvement was evident. In resistant cases I tried vitamin B_1 injections and sometimes ascorbic acid (50 mg.), but with little success. I was more fortunate with combined vitamin therapy. An ample diet with plenty of green vegetables and orange and lemon juices was recommended. To-day 11 out of 14 of the patients are temporarily cured.—I am, etc.,

Brighton. ROBERT K. STEEN.

Prevention of Welders' Flash

SIR,—Colonel R. M. Dickson's note about the prevention of welders' flash (March 18, p. 667) has been misunderstood by several readers, who have asked our advice about what it means. It is clear to us, but not to them, that Colonel Dickson is recommending that welders and their mates should wear clear-glass goggles while at work, and that the welder should also use his helmet or hand shield with a protective filter as usual.

We endorse the view that this is safe, but consider that few welders could be persuaded to wear goggles as well as using a hand shield. In short, the main radiation from the arc is ultra-violet and visible; the former can be stopped by any glass, but the latter needs a coloured glass to avoid dazzling the observer.

Another way of minimizing the danger of "arc eye" (as welders' flash is known in England) arising from reflection of radiation by the walls or ceiling of a workshop is to use paints which do not reflect ultra-violet light. Such paints can be made in a wide range of colour, both as distemper and oil paint, by using zinc oxide or zinc sulphate as the predominating ingredient of the paint. In shipyards this is of course impossible, and the chief danger of arc eye is from an adjacent welder's work; but with heavy-current welding a bystander automatically looks away to avoid the visual glare from the arc, and injury is very rare. Where currents of less than 100 amperes are used people may stare at the arc without realizing their danger. Even then the protective filtration given by dusty air is sufficient to make about 15–20 ft. (4.5–6 m.) a safe distance for watching welding for a few moments at a time.—We are, etc.,

E. C. ROLLASON,
Director of Research.

Murex Welding Processes, Ltd., Waltham Cross, Herts. E. VAN SOMEREN,
Physicist.

Sadism on the Screen

SIR,—May I reply shortly to Dr. Clifford Allen's letter (April 1, p. 787)? What I was contesting was the tendency of many people to-day to project guilt on any convenient or vulnerable victim. Such action, it seems to me, can only lead to most confusing results in our social processes. Is there not a danger in over-simplification of both the causes and contributing factors in delinquent behaviour? The trouble is that when we over-simplify causes we nearly always over-simplify remedies.

Children's responses to radio programmes and films are largely determined by the general social climate of their home life. What a specific film holds for a child is dependent to a large degree on what the child brings to the film from his own experience. We must remember the world of the adult is not the world of the child. What shocks or disturbs the adult does not necessarily shock or disturb the child.

Dr. Allen says I asked for information regarding objectionable film advertisements. I did not. I asked for the name of the film, the advertisements for which, Dr. Allen stated, said that it showed "exquisite cruelty with kid gloves."

On the question of the Hays code, Dr. Allen must remember that different nations censor films in different ways and according to national custom and convention. Britain cuts scenes which America would pass. The reverse is true. It is true of France and Italy. There can be no international yardstick of censorship so long as people think differently. In any case every film, before it is shown on the screens of this country, has to pass the very keen and able eye of the British Board of Film Censors.

Finally, Dr. Allen is misinformed. "Bicycle Thieves" has not been banned in the United States. Two cuts have been suggested.—I am, etc.,

London, W.1. A. ROLAND THORNTON,
Director of Information,
Motion Picture Association of America, Inc.

⁂ This correspondence is now closed.—ED., *B.M.J.*

Hodgkin's Disease and Pregnancy

SIR,—We think the following case should be reported because of the rare association between pregnancy and Hodgkin's disease.

An English patient, aged 25 years, presented herself with a history of eight weeks' amenorrhoea associated with considerable nausea, her periods having previously been regular. Pregnancy was diagnosed, the cervix being softened and the uterus corresponding in size to a pregnancy of eight weeks' duration. She had been delivered normally of a living female infant 21 months previously after a pregnancy free from noteworthy incident.

Seventeen months before, in June, 1948, the patient noted glandular swellings, which began to appear after the pregnancy, and so sought medical advice. At that time a chest radiograph revealed enlarged mediastinal glands, and a biopsy of gland was performed. The pathological report was to the effect that typical changes of Hodgkin's disease were present. Deep *x*-ray therapy was then instituted, with resulting amelioration of the condition.

At present there are two typically discrete glands in the left anterior triangle of the neck, the larger being 2 by 1½ by 1 cm., of

the firm, "rubbery" consistence expected in Hodgkin's disease. A similar gland is present in the left axilla, and *x*-ray examination of the chest reveals the presence of fairly massive enlargement of the mediastinal glands. However, the patient's general condition remains fairly good, her only real complaint being of excessive nausea, which has developed during the last few weeks.

From the limited literature at our disposal we can trace ten cases of pregnancy in Hodgkin's disease. In 1923 Gemmel[1] found six cases in the literature and added one of his own, and Klawans,[2] Kushner,[3] and Browne[4] have each reported a case since. The course of the disease was almost invariably accelerated by the pregnancy, the patient often deteriorating rapidly and dying in the puerperium or soon afterwards. Therefore, despite our patient's relatively good general condition, immediate termination of the pregnancy was considered to be the wisest course, and this was advised. The patient, however, was extremely keen to continue the pregnancy and was unwilling to consent to termination without taking further opinions. In view of this fact, and the fact that deep *x*-ray therapy is not available in this theatre, it was agreed that the patient should be evacuated by air to the United Kingdom without delay for further treatment. We have since learnt that on arrival in the United Kingdom, and after taking further advice, the patient finally allowed the pregnancy to be terminated.

The rarity of the association between Hodgkin's disease and pregnancy is worthy of note. The chief incidence of the disease is during the first four decades of life—viz., during the child-bearing period—and although it is about twice as common in males as in females it would seem surprising that pregnancy does not occur more frequently, particularly in view of the fact that in many cases the onset is insidious and the patient is not particularly ill during the first phase of the disease—a phase which may last for years.

We are indebted to the Director of Medical Services, M.E.L.F., for permission to forward this report.

—We are, etc.,

Moascar, Egypt. J. CLYNTON REED, Lieutenant-Colonel, R.A.M.C.
J. E. DRABBLE, Captain, R.A.M.C.

REFERENCES

1 *J. Obstet. Gynaec., Brit. Emp.*, 1923, **30**, 373.
2 *Amer. J. Obstet. Gynec.*, 1942, **43**, 895.
3 Ibid., 1941, **42**, 536.

Students' Literary Style

SIR,—The correspondence on this subject has proved most enlightening, and undoubtedly Mr. Robert M. Atkinson's letter (April 8, p. 846) crystallizes all the points. It is a fact that specialists, even of high eminence, are not necessarily good teachers—in fact many might be classed as very inferior. With the present overloaded curriculum the student has no time to consider style, nor has he the opportunity to improve his expression by reading the masters of literature; his only concern is to get facts down on paper. Some examiners accept a more or less tabulated or "synopsized" answer, and in many cases this is the only type possible in the time allotted for the question. Others, on the other hand, insist on an answer more or less in essay form. The poor student is in a quandary which category his examiner belongs to.

The time factor seems to be the important one, and if this is true regarding the qualifying examinations it is equally so in those for the higher medical qualifications. Years ago there was this difficulty of putting down on paper all you knew in the allotted time. The evil has not lessened—in fact it seems to have been accentuated. A junior colleague showed me an examination paper for a higher diploma, and in it there was one question which, had the examinee known his work, could easily have taken three-quarters of the time for the whole paper. Do examiners ever consider if the questions they set can be answered adequately in the time given? It is no argument to say that the candidates all start equal: they do not. Some may have to give some thought to a question while others may have all the points ready to put down on paper; those in the first category are not necessarily inferior in knowledge—in fact they may be superior.

As was foreseen, with the advent of the National Health Service more and more importance is being placed on "paper" qualifications. What a pity. It is experience which should count. We all know men and women, possessors of higher qualifications, who in practical work are just "ham-handed." All their knowledge is purely academic and they fail utterly in being able to put it to any practical use. In any case, is it not time that our examination system, both for qualifying and for higher diplomas, should be investigated?—I am, etc.,

Carlisle. R. J. LESLIE FRASER.

SIR,—Professor Charles Wells and Mr. J. A. Shepherd (January 28, p. 252) began this correspondence because they had been "shocked by the poverty of style and vocabulary, by faults in spelling, and by general failure to present a considered and lucid answer to the question asked," and they asked "to what extent they are of recent origin." I notice that Professor Wells and I were contemporary students, so the following may interest him. I recall one day when a professor came into the lecture theatre armed with a bundle of examination books. He raked the class with a hot fire of scathing criticism of our blatant ignorance of elementary English, and wondered how we managed to matriculate. One paper, he declared, had seventeen mistakes in grammar and spelling on the first page. Has any modern student beaten this record?—I am, etc.,

Clones, Co. Monaghan. M. G. KIERANS.

Kidnapped Greek Children

SIR,—I think the letter in your columns (March 25, p. 728) from representatives of the Corfu Medical Society about the "kidnapped Greek children" should not pass without reply. Having spent eighteen months with Unrra in post-war Greece, I learned something of the degree to which fact and humanitarian enterprise could be distorted and exploited.

These 28,000 children were evacuated from a war-stricken area, where they had been exposed to bombing, to shortage of food, and were without means of adequate schooling: 25,000 were accompanied by Greek teachers, 3,000 by their mothers. The United Nations Special Committee on the Balkans, investigating the charges of forcible abduction, could find only one parent who complained of this. Various witnesses, including the International Red Cross, and Kenneth Mathews of the B.B.C., have described the health and relative abundance which these children now enjoy in the various Eastern countries, where they have their own Greek communities and continue their schooling in Greek.

The United Nations Assembly has twice passed a unanimous resolution, including the vote of the Eastern countries concerned, that these children be returned to Greece whenever they or their parents wish. Since large numbers are known to be war orphans—their homes and villages devastated by war—and since many others have parents among the 70,000 held in prison or exile by the Greek Government, this task of repatriation clearly cannot be undertaken lightly.

Surely these children deserve our sympathy. But before we talk about "indelible psychic trauma" which your correspondents mention, let us weigh all the facts of the situation and let us remember that the Greek Government, now agitating for the fate of these children, has a record of, among other things, 3,000 political executions in the last three years.—I am, etc.,

London Colney, Herts. JUDITH WATERLOW.

Exhibitions of Medical Art

SIR,—Your report on the recent exhibition of the work of members of the Medical Artists' Association (April 8, p. 855) and another appearing in the *Lancet* of the same week (p. 695) make interesting reading in that they are complementary and cover many important points in connexion with this aspect of illustration.

Two further comments may be of interest. Following so closely upon the circular letters sent to hospitals and medical schools by the Medical Artists' Association, the aims of this exhibition must have been to reinforce statements made by the

Association and to "sell" art work to the medical profession—both reasonable motives. To my mind, however, the impact was lessened in part by the cramped and ragged way in which the work was displayed—and, further, by the poor lettering and inadequate captions. Half the number of exhibits could have been displayed to better advantage in the available space, and this in itself would have made room for more descriptive matter. Similar criticisms have been levelled at exhibitions of medical photography in the past, but it is perhaps less reasonable to expect photographers to be masters of lettering and display.

Finally, it is to be hoped that future exhibitions of medical art will not only give space to important applications such as film-strip and film-diagram work but will also permit wider representation of the medical illustration departments throughout the country.—I am, etc.,

London, S.W.1. PETER HANSELL.

Obituary

Dr. DAVID COUTTS, who died at Glasgow on January 25, was born at the village of Skipness on Kilbrannon Sound, Kintyre, in 1869. He was educated at the village school there until his fourteenth year, when he came to Glasgow to the Garnethill Public School. He graduated M.B., C.M. at Glasgow University in 1891. After a few years during which he acted as an assistant at Stevenston, Ayrshire, and at Baillieston, Lanarkshire, and also had two voyages to the East as a ship surgeon, he settled down in practice at Kinning Park in the south side of Glasgow. There he continued to work for 55 years. His practice grew rapidly, and in 1906 he was joined by his younger brother, James. Coutts never took to contract or State practice. He became a panel practitioner for a few years at the start of National Health Insurance and continued in it during the 1914–18 war until his brother returned from service. He found it irksome, however. He did not like any third party to come between himself and his patients, and he and his brother retired from panel practice soon after the first world war was over. He had grave misgivings about the National Health Service when it was introduced two years ago, and he and his brother were among the very few general practitioners in Scotland who did not join it. Although the area in which Dr. Coutts practised was largely an industrial one and his patients belonged mostly to the working class, his standard of work was a very high one. He never married, and he devoted his whole energies to his work and the welfare of his patients. He took a great interest in advances in medicine, and his patients always received the best and latest methods of treatment. One of his regrets in his later years was the increasing cost of necessary drugs. He felt that he was among the last of the traditional private general practitioners, but said that it was the cost of medicines and modern treatment and not the payment of the practitioner himself which had made private practice impossible. His attitude to his patients, rich and poor alike, was one of great courtesy and kindness, although he did not hesitate to administer a reproof when he thought it necessary. Coutts always visited his patients when they were removed to hospital, and he was well known and greatly respected in all the Glasgow hospitals and infirmaries. It is a tribute to his great qualities and integrity that no one held him in higher esteem than his fellow practitioners in his own part of the city. His friends noticed latterly that his step was a little slower on the stairs, but he made no complaint and worked till a late hour on the day before he died in his eighty-first year.

Dr. OLIVER MICHAEL FRANCIS, a well-known practitioner in British Guiana, died on February 3 at the age of 64 after a very short illness. He was born in Grenada, and graduated at McGill University in 1918. He also took the L.M.S. (Nova Scotia), and was appointed acting resident surgeon at the Colony Hospital, Grenada, on his return home. In 1919 he went to St. Lucia as a medical officer and remained there for two years. From St. Lucia he went to British Guiana as a medical officer, and he served in various parts of the colony. In 1928 Dr. Francis took the D.T.M.&H., and in 1935 the D.P.H. In that same year he was appointed an assistant medical officer of health, and in 1937 was confirmed as second assistant Government M.O.H. For a year he acted as deputy director of medical services. Although appointed medical superintendent of the Best Hospital in 1941, he was recalled 18 months later to act again as D.D.M.S. Dr. Francis served on several committees and boards, including the local government board, the medical board, the poor law commissioners, and the nutrition committee. In 1944 he was formally appointed D.D.M.S., and up to his retirement in 1947 he acted on several occasions for the director. Because of the shortage of medical officers he was asked to act as medical superintendent of the Best Hospital again in 1947, and he also served again as D.D.M.S. for short periods in 1948. Dr. Francis took a very keen interest in the local Branch of the British Medical Association, of which he was the honorary secretary for several years. In 1946 he was elected president, and again in 1947. He was mainly responsible for the publication of the *British Guiana Medical Annual* for 1947. He gave a considerable part of his time to the British Guiana Society for the Prevention and Treatment of Tuberculosis, and of this society he was secretary from 1936 to 1948. His interest in tuberculosis was shown in his published papers, for which he was awarded the Davson Medal in 1942. After retiring from the medical service, Dr. Francis went into private practice, but he still took an interest in the British Medical Association and in the Tuberculosis Society.

Dr. P. G. Barrow, Georgetown, writes: The passing of Oliver Michael Francis has created a deep sense of loss in the hearts of those with whom he came into personal contact. His life was characterized by self-discipline, diligent application, and a highly developed sense of duty. Those of us who had the privilege of working with him regarded the official recognition and advancement that came his way as a tribute to sheer sterling worth of character rather than to brilliance of attainments. Francis had an infinite capacity for taking pains. As an administrator, his characteristically painstaking approach to all problems at times exposed him to criticism on the score of diffidence and excessive caution, whereas it was really but an expression of his keenly analytical mind. In general he was uncommunicative to a fault; but during one of his rare lapses it came to light that the field of research work always held for him a peculiar fascination; and ever after, when I think of his methodical approach and his powers of concentration, I realize that in research would have lain his true forte. At the same time he was a man of parts. The very qualities which singled him out for administrative responsibility stood him in good stead in his clinical duties and subsequent work as a general practitioner, with this exception: that, away from administrative restraints, his innate kindliness had far greater scope for self-expression. Modest and unassuming in demeanour, he was a good family man, a loyal friend, and, behind an impassive exterior, a humanitarian of humanitarians.

Dr. HAROLD FREIZE STEPHENS died on March 9 at his home at Coleshill within one month of his retirement from the post of medical superintendent of Coleshill Hall Mental Deficiency Colony. He was appointed the first medical superintendent in 1929 and had the task of watching over the creation and development of this new institution. After that his life was entirely given over to its welfare, although he was dogged by ill-health during his latter years. Born on February 18, 1885, in Madras, he was the eldest son of Daniel Freize Stephens, of the public works department there, and of Dr. Grace Stephens, who was physician to the Maharanee of Gwalior and one of the first women doctors in India. He was educated at Nani Tal, and in 1902 came to England, where he entered Durham University and subsequently Guy's Hospital, taking the conjoint diploma in 1912. Dr. Stephens then went to Earlswood Royal Institution as an assistant medical officer. In 1915 he was commissioned in the R.A.M.C. and served as R.M.O. and later in a motor ambulance column in France. He stayed in the Army after the war and went to Iraq and Persia, and was later appointed mental specialist to the Northern Command in

India. He was demobilized in 1921 and took up an appointment as deputy medical superintendent to the Manor Hospital, Epsom, which he held until he took up his duties at Coleshill, where there was full scope for his considerable administrative ability. He married in 1916 Ada Elizabeth Johnson, who survives him with three sons.—B. E. W.

Dr. ARTHUR BLACKWOOD WARD died on March 11 at the age of 79 at Queen Mary's Hospital, Roehampton, of which he had been medical superintendent. Born in 1870, he was educated at Christ's Hospital, Selwyn College, Cambridge, where he took his B.A. in 1892, and St. Bartholomew's Hospital. He graduated M.B., Ch.B. in 1896. He was house-surgeon in the ophthalmic department of St. Bartholomew's Hospital before going out to South Africa and obtaining an appointment as medical officer to Grey College, Bloemfontein. In 1903 he was elected president of the Medical and Pharmacy Council of the Orange Free State. During the 1914–18 war Ward served as a medical officer with the South African Forces and later in Europe, when he commanded a South African General Hospital in France. He was twice mentioned in dispatches, and was awarded the D.S.O. in 1917 and created C.B.E. at the end of the war. Later he became deputy director-general of medical services at the Ministry of Pensions, and subsequently medical superintendent of Queen Mary's Hospital, Roehampton. He served on the Council of the B.M.A. in 1920–1, and was a member of the Dominions Committee at that time. He retired in 1936, but for part of the recent war went back to Whitehall to help at the Ministry of Health in the organization of the Emergency Medical Services, of which he was for a time director.

Dr. ALLAN DUNSMUIR died at his home in Tasmania on March 14 at the age of 67. He was born in Ayrshire, and graduated M.B., Ch.B. at the University of Glasgow in 1907. Five years later he went out to Tasmania, where he settled in general practice at New Norfolk. He was medical officer of health for the town, took charge of the cottage hospital there, and was also official visitor to the local mental asylum. He married Miss Beatrice Dean, and later returned to Scotland with his wife and lived for some time at Clackmannan and at Glasgow. During the recent world war he served as a ship surgeon with the Merchant Navy. Later he was a member of the Glasgow Corporation outdoor medical service. When he finally retired he went back to Tasmania and lived in retirement in Hobart. Allan Dunsmuir was a good doctor who was well liked by all his patients. His skill, his thoughtfulness for others, and his considerable professional ability will long be remembered. He is survived by his widow and two daughters, to whom the sympathy of all his friends and colleagues will be extended.

Dr. E. B. C. Mayrs writes: Former students of Professor T. H. MILROY must have heard of his death with sincere regret (April 1, p. 791). In his earlier days, at any rate, when classes did not often exceed 50 or 60 members, he seemed to know their names before they had attended half a dozen lectures. He was always ready to help them and took a kindly interest in their subsequent careers. His scholarship and research gained him recognition from various universities, but these honours never caused the least change in his unassuming disposition. He and his brother, the late Professor J. A. Milroy, had a special place in the affection of their colleagues, many of whom will always remember pleasant evenings spent in their hospitable home. When he retired in 1935, his return to Scotland with his sisters and younger brother was deeply regretted by their numerous friends in Belfast, where their genuine kindness and interest in social welfare had made a permanent impression.

Professor R. D. Lockhart writes: By the death of the anatomist Professor S. E. WHITNALL the salt has lost a certain piquancy in its savour. Apart from his serious contributions to anatomy already cited in your columns (March 4, p. 554) it is but fitting that allusion should be made to his *Astonishing Anatomy*, a classical masterpiece in humorous vein. It scintillates with merriment from the first page, with its inserted slip headed "Errata—Price 1s.—should be more," to the dense blur on the last page entitled "Student's Final Impressions of the Pelvic Fascia." Whitnall used to say, with a twinkle in his eye, it took him many years to live this down, but for many anatomists throughout the Old and the New World it will always awaken memories of a gay and graceful figure "of infinite jest and most excellent variety."

Medico-Legal

PRIVILEGED DOCUMENTS

[FROM OUR MEDICO-LEGAL CORRESPONDENT]

Squadron Sergeant-Major James Edward Pettitt, aged 37, dropped dead during the fourth day of a drill course at the Caterham Guards Depot. He was drilling with a squad at an estimated rate of 135 paces a minute. In spite of the Army instruction that every entrant to the depot should bring a medical certificate stating that he was fit to undergo the course, this man had only a certificate of freedom from infection. At the inquest,[1] held by Dr. C. F. J. Baron, the East Surrey coroner, a pathologist said that Pettitt had been 6 ft. 3 in. (190 cm.) tall and had suffered from advanced disease of the heart. The heart weighed 24 oz. (722 g.), which was twice the normal weight.

Captain W. Littlestone, R.A.M.C., said that he had examined the man in Germany on December 30. He had then found no hardening of the arteries or enlargement of the heart, and a normal blood pressure. The man had said that he had been a champion weight-lifter, and until two years before had played rugby football regularly. Replying to questions put by the coroner, Captain Littlestone said that he would not have certified Pettitt fit to go on the course, because for two years he had held office appointments with various German civilian labour organization units. If he had known the man was going on the course, he would have advised a preliminary period of drill training for toning up; if Pettitt had found that training no effort, he might have passed him.

The coroner then called for the production of Pettitt's medical history sheet. Mr. J. H. L. Royle, appearing for the War Office, claimed privilege—that is, the legal right of any Government department, in exercise of the Royal prerogative, to decline to produce any official document if its head certifies that to do so would not be in the public interest. The court has no power to test this ground. Mr. Royle produced the necessary certificate from the Secretary of State for War. He added that this privilege was universally claimed whether to do so was in the interest of the Government department or not.

The coroner thereupon remarked that the court was left guessing. Nor, he added, had the medical officer seen the history sheet. This officer, after a thorough examination, had not found the gross abnormality which was now known to exist. He could not see how it could be in the public interest not to produce the medical history sheet. The absolute immunity of the State department operated harshly against the family of the dead man, who had very good reasons for knowing his medical history. He had received many letters from relatives of other soldiers who had been denied medical records by the War Office. The position was unsatisfactory. If the disease had been known, the man should not have been in the Army; if it had not been known, an adequate examination would, according to the evidence, have disclosed it. It seemed that the arrangements for men taking the drill course should be improved, for many men did not bring any sort of certificate for that strenuous course, although the regulations clearly stated that they should. A verdict of death from natural causes was recorded.

The invariable withholding of the evidence provided by such documents from the courts on the ground of public interest appears to be an anachronism. Too often it may merely serve to avert inconvenient inquiry from the procedure of the department concerned. Now that an individual may sue the Crown, and, subject to certain conditions, obtain discovery of documents, it is time that the whole of this class of privilege was drastically revised.

[1] *The Times* and *Morning Advertiser*, February 2, 1950.

Medical Notes in Parliament

MIDWIVES BILL

The Midwives (Amendment) Bill was taken in Committee in the House of Lords on March 30 (April 15, p. 912).

The Bill passed through the Report stage on April 4 without debate and was read a third time without further discussion on April 5 after a minor amendment had been made.

THE BUDGET

In his Budget speech on Tuesday, April 18, Sir Stafford Cripps, Chancellor of the Exchequer, announced a reduction in the lower rates of income tax and an increase in the petrol tax of ninepence, together with a doubling of the standard petrol ration. The lower rate of income tax, now 3s. and 6s., will be reduced to 2s. 6d. and 5s.

In last year's expenditure the largest individual increase shown in the recent Supplementary Estimates was for the National Health Service—£123m. for England and Wales and £10m. for Scotland. The House would recall that the Minister of Health said in the Debate on the Supplementary Estimates that the period of their initiation was past, and there was no excuse for exceeding the Estimates in the coming twelve months. The Minister of Health had also stated that further measures of control must be exercised to make certain that the Annual Estimate for the Service as a whole was not exceeded.

Clearly it was not possible in the existing circumstances to permit any overall increase in the expenditure on the health services. Any expansion in one part of the Service must in future be made up by economies or, if necessary, by contraction in others. In exercising this essential control, however, in total expenditure regard would of course be paid to priorities of service. The Minister of Health and the Secretary of State for Scotland had, he believed, the necessary powers, but should these prove to be insufficient an Amending Act would be introduced.

It was not proposed to impose any charge immediately in connexion with prescriptions, since it was hoped that a more easily administered method of economizing in these branches of expenditure could be introduced shortly. The power to charge for prescriptions would of course remain, so that it could be used later if it was needed.

Aged and Infirm

Lord SALTOUN, in the House of Lords on April 5, drew attention to the alteration brought about in the situation of old or infirm persons by recent social changes. There was a gap between the social welfare services and the hospital services. The medical departments of the public institutions had been taken over by the hospital boards, which kept the beds for hospital patients, while hostels under the Social Welfare Committee could accommodate only those aged people who were physically fit. It was the responsibility of the hospital board to allocate beds to persons who were bedfast, but the pressure of surgical and maternity cases was so great that there was not room for those who were infirm. The Ministry of Health had admitted the public concern about the problem. In the "bad old days" things were different, and a relieving officer might well have had to face a charge of manslaughter for failure to look after the old. He suggested that local authorities should be empowered to pay two or three guineas a week for looking after old people. Welfare officers should have power to require a hospital to furnish a bed if necessary. Because that power was absent to-day, cases occurred such as that of the old lady who was sent to hospital with a broken femur, was given a couple of tablets, and was sent home, where she died.

Lord AMULREE spoke of the difficulty of getting admission to hospital for people who had passed the age of 60 or 65, no matter what was wrong with them. He felt there was a change of mind coming in the medical profession because it had been found that people of whatever age could be rehabilitated. Then they could be discharged from expensive beds in hospital and put into some kind of home if they could not go to their own homes. He was pleased to see from the report published by the Minister of Health that there were 36 persons of consultant or specialist grade and 19 or 20 in the junior grade looking after people in chronic sick wards. When the National Health Services Bill had been debated by the Lords the number of such workers had been only two or three. Rochdale had managed to transfer to homes under Part III of the National Assistance Act patients who were in the wards of Rochdale Infirmary for purely social reasons.

Lord WEBB-JOHNSON spoke of pathetic cases of young people alone and desperately sick. The old people were not always so sick as they imagined. Many who went into homes for incurables would be found capable of rehabilitation if an enterprising medical staff were appointed. That the problem of old people had become greater in recent years was only an impression. The House wished to be informed whether it really was an increasing or a decreasing problem. The most successful experiment to solve this problem had been that of William Whiteley, who established homes in the country for aged people and had put into that colony a nursing service. To get an old patient into hospital had been a problem for the last century. The real solution was to help the younger generation to keep their old folks in their homes.

Lord KERSHAW said the services provided for aged and infirm people were infinitely better than they had been. Cases of elderly people dying alone must occur whatever system they had. Under the present system which entitled everyone to free medical service it was less likely that anyone would suffer in silence or alone. The idea of segregating old people in homes had to be considered with extreme caution. The possibility of old people suffering in loneliness would be diminished by the Health Services now available and by the general interest displayed in the welfare of the old. Mr. Bevan, he said, would give sympathetic consideration to all suggestions made in the debate.

Universities and Colleges

UNIVERSITY OF LONDON

Max Leonard Rosenheim, M.D., F.R.C.P., has been appointed to the University Chair of Medicine, tenable at University College Hospital Medical School, from April 1.

A course of three lectures on "The Cytology and Histochemistry of the Uterus and Placenta" will be delivered by Professor G. B. Wislocki, professor of anatomy at Harvard University, at University College (Anatomy Theatre), Gower Street, London, W.C., on May 12, 15, and 22, at 5.30 p.m.

Professor Perrin H. Long, professor of preventive medicine at Johns Hopkins University School of Medicine, will deliver a lecture on "The Use of Antibiotics in the Treatment of Infectious Diseases, with Special Reference to the Effects of Aureomycin and Chloramphenicol," at St. Mary's Hospital Medical School (Wright-Fleming Institute Lecture Theatre), Paddington, W., on May 23, at 5.30 p.m.

A lecture on "The Development of Normal and Abnormal Vision Observed in Animals with Transplanted Eyes" will be delivered by Professor L. S. Stone, professor of comparative anatomy at Yale University, at King's College, Strand, London, W.C., on June 8, at 5.30 p.m.

A lecture on "The General Pathology of Virus Infection" will be delivered by Professor F. M. Burnet, F.R.S., professor of experimental medicine in the University of Melbourne, at the London School of Hygiene and Tropical Medicine, Keppel Street, Gower Street, W.C., on May 9, at 5.30 p.m.

Professor F. Bremer, professor of general pathology in the University of Brussels, will deliver a course of three lectures on "The Physiology of the Central Nervous System" at University College (Physiology Theatre), Gower Street, W.C., on May 17, 19, and 23, at 5.15 p.m.

All the above lectures are addressed to students of the University and to others interested in the subjects. Admission is free, without ticket.

ROYAL COLLEGE OF SURGEONS OF ENGLAND

The following lectures will be delivered at the college (Lincoln's Inn Fields, London, W.C.): May 3, 5 p.m., Robert Jones Lecture by Professor P. D. Wilson, "Experience with the Use of Refrigerated Bone in Surgical Procedure"; May 4, 5 p.m., Otolaryngology Lecture by Mr. V. E. Negus, "The Evolution and Treatment of Pharyngeal Diverticula"; May 11, 5 p.m., Hunterian Lecture by Professor H. F. Moseley, "Ruptures of the Rotator Cuff"; May 24, 3.45 p.m., Dr. Russell J. Reynolds, cineradiographic demonstration of orthopaedic subjects (joint movements, etc.); 5 p.m., Erasmus Wilson Demonstration by Mr. P. H. Mitchiner, "Diseased Joints"; May 26 and 30, 5 p.m., Arnott Demonstrations by Mr. F. S. Gorrill, "The Anatomy of the Bone" and "The Physiology of the Bone," respectively. The lectures are open to those attending courses at the college and to all other medical practitioners, dental surgeons, and advanced students.

At a meeting of the Council of the College held on April 13, with Sir Cecil Wakeley, President, in the chair, Jacksonian Prizes for 1949 were awarded to Messrs. F. Masina and F. G. Hollands for their essays on "Malignant Disease of the Urinary Bladder." The subject for essays in 1951 is "Neoplasm, Innocent and Malignant, of the Pancreas."

Dr. Walter Briggs, Dr. Leonard Colebrook, Dr. Cuthbert Dukes, and Dr. Arthur Beresford Beresford-Jones were elected to the Fellowship of the College without examination as being medical practitioners of at least 20 years' standing.

Dr. Arthur W. Allen, chairman of the Board of Regents of the American College of Surgeons, was elected a Hunterian Professor for 1950.

A Leverhulme Scholarship was awarded to Mr. David Innes Williams for his research on congenital hydro-ureter in childhood.

Dr. H. D. Ross was appointed Bland-Sutton Scholar.

The Begley Prize for Anatomy and Physiology was awarded to John Douglas Spouge (Sheffield).

Professor A. B. P. Amies, F.R.A.C.S., F.A.C.D., of Melbourne, was appointed Charles Tomes Lecturer on the recommendation of the Faculty of Dental Surgery.

ROYAL COLLEGE OF SURGEONS IN IRELAND

The Fellowship of the College was conferred on March 13 upon D. F. V. Lane, C. C. D. Martin, and E. A. McVerry.

CONJOINT BOARD IN SCOTLAND

The following candidates, having passed the final examination, were admitted L.R.C.P.Ed., L.R.C.S.Ed., L.R.F.P.&S.Glas., on March 16:

Audrey J. J. Abel, Maureen M. Aylmer, J. Bonner, R. F. Caddell, H. Coll, Maureen Coneghan, Phyllis Connor, J. H. A. Craig, B. K. A. Crawford, D. McD. Cruickshank, Margaret S. Curley, S. I. Davidson, G. S. Fiddler, J. A. Fleming, W. G. French, Emily A. Friel, R. A. Gelfer, Iona J. Godson, Philippa D. Harrison, D. M. Hesslegrave-Jackson, R. Hogg, L. Huddlestone, R. A. Ingles, T. F. McC. Jackson, Mary W. A. Jamieson, R. G. Kibbey, A. W. Laing, C. Langman, C. Lipp, W. R. McKenzie, H. D. Malasky, Margaret McN. Montgomerie, D. G. Muldoon, Mary H. Murray, Wilma Nield-Faulkner, C. Randall, L. Robinson, H. L. Sandler, S. D. Sethi, E. Sopher F. C. Van-Coller, J. White, G. C. Wilson, Eileen M. Wolstenholme, H. Woolfson.

The Services

A *Supplement* to the *London Gazette* has announced the following awards:

"4 Clasps" to the Territorial Efficiency Decoration.—Major-General Sir E. M. Cowell, K.B.E., C.B., D.S.O., T.D. (Honorary Colonel, R.A.M.C.).

"3 Clasps" to the Territorial Efficiency Decoration.—Brigadier F. R. Sandford, C.B.E., M.C., T.D. (Honorary Colonel, R.A.M.C.), Colonels A. T. B. Dickson, O.B.E., T.D., and J. E. Rusby, M.C., T.D., R.A.M.C.

"2 Clasps" to the Territorial Efficiency Decoration.—Lieutenant-Colonel J. W. Galloway, T.D., Major (Acting Lieutenant-Colonel) F. R. Langmaid, O.B.E., T.D., and Major R. S. Taylor, O.B.E., T.D., R.A.M.C.

"1st Clasp" to the Territorial Efficiency Decoration.—Colonel H. F. Apthorpe-Webb, T.D., R.A.M.C.

Territorial Efficiency Decoration and 1st Clasp.—Lieutenant-Colonels J. D. Finlayson and T. N. Rudd, and Major E. C. Murphy, R.A.M.C.

Territorial Efficiency Decoration.—Lieutenant-Colonel S. W. Barber, M.B.E., R.A.M.C.

Air Commodore W. J. G. Walker, C.B.E., R.A.F., has been appointed Honorary Surgeon to the King, in succession to Air Vice-Marshal D. McLaren, C.B.E., R.A.F., who has vacated the appointment on retirement from the R.A.F.

No. 13

INFECTIOUS DISEASES AND VITAL STATISTICS

We print below a summary of Infectious Diseases and Vital Statistics in the British Isles during the week ended April 1.

Figures of Principal Notifiable Diseases for the week and those for the corresponding week last year, for: (a) England and Wales (London included). (b) London (administrative county). (c) Scotland. (d) Eire. (e) Northern Ireland.

Figures of Births and Deaths, and of Deaths recorded under each Infectious disease, are for: (a) The 126 great towns in England and Wales (including London). (b) London (administrative county). (c) The 16 principal towns in Scotland. (d) The 13 principal towns in Eire. (e) The 10 principal towns in Northern Ireland.

A dash — denotes no cases; a blank space denotes disease not notifiable or no return available.

Disease	1950 (a)	(b)	(c)	(d)	(e)	1949 (Corresponding Week) (a)	(b)	(c)	(d)	(e)
Meningococcal infection	36	5	10	2	1	39	4	15	3	3
Deaths		1	—				1	1		
Diphtheria	67	5	17	4	2	117	13	40	6	5
Deaths	1	—	—	—	—	1	—	—	—	—
Dysentery	461	11	100	3	—	34	7	26	1	—
Deaths					—					—
Encephalitis, acute	2	—	—	—	—	1	—	—	—	—
Deaths		—					—			
Erysipelas			32	4	4			27	11	1
Deaths										
Infective enteritis or diarrhoea under 2 years				16					36	
Deaths	12		4	4	—	35		4	3	6
Measles*	6,307	118	285	93	360	15,307	1274	340	118	178
Deaths†			—	2	—			1	1	—
Ophthalmia neonatorum	56	4	13		1	47	9	7	—	1
Deaths										
Paratyphoid fever	—	—	—		—	7	—	—		—
Deaths	—		—		—	—		—		—
Pneumonia, influenzal	941	45	9	—	7	1,547	65	19	12	8
Deaths (from influenza)‡	121	18	3	8	4	327	26	9	2	3
Pneumonia, primary			167	¶				242		
Deaths	245	39		14	8	444	62		9	16
Poliomyelitis, acute	20	—	1	3	2	17	2	3	1	—
Deaths§	2	—		—		1	—			
Puerperal fever		—	8				—	4		
Deaths										
Puerperal pyrexia‖	82	8	8	1	1	99	9	6	2	—
Deaths							—			
Relapsing fever	—	—			—	—	—			—
Deaths										
Scarlet fever	1,749	116	220	80	105	1,357	105	173	100	44
Deaths†			—	—	1			—	—	—
Smallpox	—	—	21		—	—	—	—	—	—
Deaths					—				—	—
Typhoid fever	1	—	—	2	—	3	—	—	1	—
Deaths	1	—	—		—	—	—	—	—	—
Typhus fever	—	—	—	—	—	—	—	—	—	—
Deaths									—	—
Whooping-cough	2,488	116	362	67	80	2,978	181	244	122	68
Deaths	3	—	2	1	2	9	1	7	2	—
Deaths (0–1 year)	250	31	44	28	9	359	48	51	22	21
Deaths (excluding stillbirths)	5,348	810	612	260	130	6,847	971	680	187	187
Annual death rate (per 1,000 persons living)			12·3					13·6	11·2	
Live births	7,826	1290	1003	448	262	8,444	1336	974	415	256
Annual rate per 1,000 persons living			20·1					19·5	25·7	
Stillbirths	181	18	25			206	32	32		
Rate per 1,000 total births (including stillborn)			24					32		

* Measles is not notifiable in Scotland, and the returns are therefore an approximation only.

† Deaths from measles and scarlet fever for England and Wales, London (administrative county), will no longer be published.

‡ Includes primary form for England and Wales, London (administrative county), and Northern Ireland.

§ The number of deaths from poliomyelitis and polio-encephalitis for England and Wales, London (administrative county), are combined.

‖ Includes puerperal fever for England and Wales and Eire.

¶ Primary pneumonia no longer notifiable in Eire.

EPIDEMIOLOGICAL NOTES

Smallpox in Liverpool and Glasgow

When the s.s. *Cilicia* arrived at Liverpool from Bombay on April 16 a suspected case of smallpox was removed to the port isolation hospital. The patient, a boy aged 5 who was travelling with his mother in a first-class cabin, developed a rash on April 10 and was at once isolated in the ship's hospital. The 320 passengers, who had all been vaccinated, were examined and allowed to proceed to their destinations under surveillance, the medical officers of health of the areas to which they were going being duly informed. The diagnosis has not yet been confirmed, but all precautions have been taken as though the case were one of smallpox.

Since no further cases had been notified in Glasgow by April 17 the city was regarded as free from smallpox after midnight on that date. The declaration of freedom from smallpox was postponed in the county of Lanark because of an "undetermined" illness in a patient at Hairmyres Hospital. At most other hospitals normal visiting arrangements were resumed on April 17, but in Glasgow itself hospitals will be reopened to visitors from April 22.

Influenza in the United States

There were 27,045 cases of influenza registered in the United States during the tenth week of 1950 (March 5–11), an increase of 10% on the preceding week. This is the largest number of notifications registered for the tenth week during the years 1942–50; the notifications of each of the 31 preceding weeks also represented a maximum as compared with the corresponding weeks of the years 1942–50. The total notifications for the first 10 weeks of 1950 amounted to 115,873. In the nine years' period 1942–50 this figure has only twice been exceeded, in 1944 (310,857) and in 1946 (165,882). It exceeds by 53,291, by 8,806, and by 70,566 cases, respectively, the corresponding totals for 1947, 1948, and 1949. Laboratory reports suggest that this recent increase in the incidence of influenza "is due to A—prime virus or a virus closely related."

Discussion of Table

In *England and Wales* there were increases in the incidence of measles 591, whooping-cough 126, and dysentery 34, with decreases in the notifications of acute pneumonia 141 and scarlet fever 56.

The largest increases in the incidence of measles were Warwickshire 175, Middlesex 119, Durham 116, and Essex 84; the only decrease of any size was in the Soke of Peterborough 51. There was very little change in the local trends of scarlet fever.

The chief features of the returns of diphtheria were decreases in the notifications in Lancashire 7 and London 4; the largest centre of diphtheria was Birmingham C.B. with 11 cases, or one-sixth of the total for the whole country. The only notable variation in the returns for whooping-cough was a decrease of 90 in the notifications in Yorkshire West Riding.

Notifications of dysentery were 16 above the total recorded six weeks ago, which was the largest total of recent years. The largest returns during the week were: Yorkshire West Riding 110 (Sheffield C.B. 76, Leeds C.B. 15, Bradford C.B. 8); Durham 110 (Blaydon U.D. 36, Stanley U.D. 32, Gateshead C.B. 10, Sunderland C.B. 10, West Hartlepool C.B. 9, South Shields C.B. 7); Lancashire 67 (Manchester C.B. 31, Liverpool C.B. 8, Chadderton U.D. 8, Lancaster M.B. 8); Yorkshire North Riding 33 (Middlesbrough C.B. 29); Middlesex 35 (Wembley M.B. 32); Northumberland 23 (Newcastle-upon-Tyne C.B. 11, Newburn U.D. 7); Essex 18 (Wanstead and Woodford M.B. 11); Norfolk 15 (Downham R.D. 15); London 11; Glamorganshire 10 (Cardiff C.B. 8).

In *Scotland* there were decreases in the incidence of measles 44, whooping-cough 36, and acute primary pneumonia 24, with an increase of 31 in the notifications of dysentery; the largest returns of dysentery were Glasgow 65, Edinburgh 16, and Dundee 15.

In *Eire* the largest variation in the trends of infectious diseases was an increase of 16 in the incidence of scarlet fever; a slight rise occurred in most areas. Although there were only minor changes in the totals for measles and whooping-cough both these conditions were more widespread than in the preceding week.

In *Northern Ireland* a decrease of 44 was recorded in the notifications of measles and a rise of 29 in the incidence of whooping-cough. The experience of Belfast C.B. was mainly responsible for these trends.

Week Ending April 8

Notifications of infectious diseases in England and Wales during the week include: scarlet fever 1,316, whooping-cough 2,127, diphtheria 65, measles 5,487, acute pneumonia 698, acute poliomyelitis 19, dysentery 363, paratyphoid fever 3, typhoid fever 1; 117 deaths were attributed to influenza in the great towns.

Medical News

Control of Undulant Fever

The United Nations International Children's Emergency Fund plans to pasteurize milk in Malta in a scheme to eliminate brucellosis from the island. With new plant all the milk produced in Malta can be processed. Pasteurization equipment and insulated storage tanks will be obtained, as well as sterilization and cooling receptacles and washing and bottling machines. Unicef has also agreed to demonstrate the treatment of undulant fever in Yugoslavia.

Public Health Laboratory Service

Since the Public Health Laboratory Service was placed on a permanent basis after the war, the Medical Research Council has continued to administer it as agent for the Ministry of Health. It has been decided that the council will, with certain reservations on matters of broad policy, now delegate this function to a Public Health Laboratory Service Board, composed in the first instance as follows: Mr. A. Landsborough Thomson, D.Sc. (chairman), Professor S. P. Bedson, F.R.S., Dr. C. Metcalfe Brown, Dr. A. N. Drury, F.R.S., Sir Percival Hartley, F.R.S., Sir W. Wilson Jameson (*ex officio*), and Dr. A. A. Miles, with Dr. W. H. Bradley as observer from the Ministry of Health. The Emergency Public Health Laboratory Service in England and Wales was organized by the Medical Research Council before the war at the request of the Government and was brought into being in 1939. Statutory authority for continuing it on a permanent basis was given by Section 17 of the National Health Service Act, 1946. The director of the service is Dr. G. S. Wilson.

Hospital Services in N. Ireland

The first meeting took place recently in Belfast of the Northern Ireland Committee of the Nuffield Provincial Hospitals Trust. In 1942 the Northern Ireland Regional Hospitals Council was constituted under the chairmanship of Mr. (now Sir) David Lindsay Keir. This council was formed under the aegis of the Nuffield Provincial Hospitals Trust, and it will be remembered mainly for its "Survey of the Hospitals Services of Northern Ireland," which was published in 1945, and following that its "Plan for the Hospital Services for Northern Ireland," published in 1946 as "The Red Book." Many tributes have been paid in Parliament and elsewhere to the assistance these publications afforded to those responsible for framing the present hospitals service. With the passing of the Health Services Act (Northern Ireland), 1948, it was believed that the council had fulfilled its main purpose. But it was felt that there was a place for an independent voluntary body, fully representative of all the health and social services, and accordingly the final act of the Regional Hospitals Council was to draw up a new constitution, providing for the formation of a new committee to be known as the Northern Ireland Committee of the Nuffield Provincial Hospitals Trust. Under its constitution this committee has for its purpose:

(*a*) To assist the co-ordination on an area basis of hospital services.
(*b*) To initiate and promote research which aims at the raising of the standard of hospital services throughout the area.
(*c*) To advise on any proposals which serve the foregoing purposes.

Its functions are to advise and co-operate with the statutory and other bodies on such matters as may seem conducive to the improvement of the hospital, ancillary, or auxiliary services within the area, and also to initiate, promote, and encourage, whether independently or in consultation with appropriate bodies, research on causation, prevention, and treatment of disease, and for the improvement of the hospital, ancillary, and auxiliary services. It aims to achieve in every possible way the raising of the standard of service to the patient throughout the area. The first meeting of this committee was mainly concerned with business of a formal character, but preliminary discussions took place on several projects. It was decided that the existence of the committee should be made public, so that any person or body of persons interested might have an opportunity of submitting for the consideration of the committee proposals coming within its purposes and functions.

Ulster Paediatric Society

The fourth clinical meeting of the Ulster Paediatric Society for the year 1949–50 was held in the Institute of Pathology, Queen's University, Belfast, on March 29. Dr. J. E. Morison had arranged an interesting selection of specimens and coloured transparencies to illustrate recent trends in paediatric pathology.

Royal Scottish Academy

At a general assembly of the Royal Scottish Academy held on March 21 Mr. Charles R. Whittaker, of Edinburgh, was elected an Honorary Member and Professor of Anatomy to the Academy.

The Pharmaceutical Society

Professor Adam Davidson Macdonald, Leech professor of pharmacology, materia medica, and therapeutics in the University of Manchester, has been nominated by the Privy Council to be a member of the council of the Pharmaceutical Society of Great Britain in succession to Professor W. J. Dilling, Liverpool, who has resigned owing to ill-health.

Dr. Jessie Macgregor Prize for Medical Women

An award of the Jessie Macgregor Prize for medical women will be made in July to the applicant who presents the best record of original work in the science of medicine. Such work may be published or unpublished, but must not have been published earlier than three years before July, 1950. The value of the prize is about £50 and is open to women who are graduates in medicine of the University of Edinburgh or who have taken the Scottish Triple Qualification. Applications, marked "Dr. Jessie Macgregor Prize," must reach the convener of trustees, 9, Queen Street, Edinburgh, 2, not later than June 30.

St. Mary's Hospital

An appointment system in the out-patient department of the hospital for patients who have not previously attended, or who are beginning a new series of attendances, will come into operation on May 1. Appointments may be booked as follows: (1) By telephone message to AMBassador 2241. (2) By letter addressed to the appointments clerk, St. Mary's Hospital, London, W.2. (3) By the personal call of a patient at the out-patient department of the hospital with a letter of introduction to the consultant concerned. A letter of introduction should always accompany the patient.

International Health Control

At its fifth session on March 9–11 the Public Health Committee of the Brussels Treaty Organization considered the system of health control over air traffic introduced on February 1. Passengers travelling between Britain, Belgium, France, Holland, and Luxembourg need no longer produce personal declarations of origin and health. As regards sea communications, a uniform system has been outlined which will eliminate the maritime declaration of health for ships plying between any two ports in these five countries.

Sheriff Appointed

Dr. David Rhys Lewis, of Tredilion, Uplands, Swansea, has been appointed Sheriff for Breconshire, South Wales, for the year 1950.

Ophthalmology Prize

The Council of the Ophthalmological Society of the United Kingdom has instituted an award of £100 for the Treacher Collins Prize Essay. It will be awarded triennially for the best essay submitted on a subject selected by the council, and is open to qualified medical practitioners of any nationality. The essay must be written in English. The subject for the next award is "Exophthalmos in Relation to Endocrine Disorder." The closing date for sending in essays is September 30, 1951. They should be submitted to the honorary secretary, Ophthalmological Society of the United Kingdom, 45, Lincoln's Inn Fields, London, W.C.2, from whom any further particulars can be obtained. No name should be on any essay, but a distinguishing pseudonym or quotation, which should be on a sealed envelope containing the candidate's name and address, should accompany the essay.

COMING EVENTS

British Medical Students Association

The following arrangements have been made for the week April 21–28. *Aberdeen.*—April 25: Lecture by Dr. J. Stanley-White. "Sex Hormones—Physiology, Diagnosis, and Treatment," technicolour film show. April 25 (Medical Society): Lecture by Dr. Alexander Mair on "Silicosis in Aberdeen." *Birmingham.*—April 27: Lecture by Dr. Alistair French on "Legal and Ethical Aspect of Medical Practice."

Medical Charities Ball

A ball for the benefit of medical charities will be held in the Great Hall, B.M.A. House, on Thursday, May 4, at 7.30 p.m. for 8 p.m. It is organized by the Metropolitan Counties Branch of the B.M.A. A similar ball held last year was a great success, a large sum being raised for medical charities. Entertainments will be provided, and special arrangements have been made for a hot supper. The cost of the tickets is two guineas. Applications should be sent to the Secretary, The Charities Ball Committee, Metropolitan Counties Branch, B.M.A. House, Tavistock Square, London, W.C.1. Cheques should be made payable to the Charities Ball Committee. Contributions to medical charities from those unable to attend the ball would also be most welcome and should be sent to the same address.

Contraceptive Technique

A lecture and demonstration (on living models) on contraceptive technique will be given by Dr. Marie C. Stopes at the Mothers' Clinic, 108, Whitfield Street, London, W., on Thursday, May 4, at 2.30 p.m. Tickets must be obtained in advance, as space is limited.

Association of Surgeons

The annual meeting of the Association of Surgeons of Great Britain and Ireland will be held in London on May 4–6. A reception by the president and council of the Royal College of Surgeons will be held on May 3 at 9 p.m. at the Royal College, and a reception will be held at the Senate House, University of London, on May 5 at 8.45 p.m., by the Chancellor, the court, and the senate of the University. The programme includes the following discussions: Thursday, May 4, 9.30 a.m.: Discussion on "Gravitational Ulcers of the Leg," to be opened by Professor M. Boyd. 2.30 p.m.: Operating and clinical demonstrations. Friday, May 5, 9.30 a.m.: Symposium on "The Gastric Blood Vessels," to be introduced by Professor F. H. Bentley. 10.45 a.m.: Discussion on "Anticoagulants in Surgery," to be opened by Professor R. M. Janes. 2.30 p.m.: Operating and clinical demonstrations. Saturday, May 6, 9.30 a.m.: Discussion on "The Physiology of the Alimentary Tract following Operation for Simple Peptic Ulcer," to be opened by Professor Charles Wells. Information may be obtained from the honorary secretary of the association at 45, Lincoln's Inn Fields, London, W.C.2.

Newsholme Lectures

An annual series of three public lectures has been created under a trust by the late Sir Arthur Newsholme, who was Chief Medical Officer of the Local Government Board from 1908 to 1919, when it gave place to the Ministry of Health. The range of subjects to be covered by these lectures, as set out by Sir Arthur Newsholme, is as follows: (1) The application of anatomical and physiological teaching to the maintenance of health; (2) the application of clinical teaching to the prevention of illness as it affects the hospital patient; and (3) the effective curtailment of and recovery from illness. Sir Henry Cohen, President-Elect of the British Medical Association, has accepted the invitation of the London School of Hygiene and Tropical Medicine to deliver the first series of lectures, and has chosen as his subject "The Clinical Contribution to Public Welfare." The lectures will be given at the school (Keppel Street, Gower Street, W.C.) on May 22, 23, and 24, at 6.15 p.m. Admission is free and no tickets are required.

Lectures on Medicine

A course entitled "Journées Médicales Annuelles" on new developments in medicine will be held on May 19–21 at the Broussais Hospital, Paris. The participants are limited to 150, and the registration fee is 2,000 francs. Further information may be obtained from Professor Jean Hamburger, 29, Boulevard de Courcelles, Paris, 8e.

Gastroenterology

A refresher course in gastroenterology will be held on May 22–27 at L'Hôpital Tenon. Particulars may be obtained from Dr. Viguié, Laboratoire Marcel-Brulé, Hôpital Tenon, 4, Rue de la Chine, Paris, 20e.

Heberden Oration

The Heberden Society has arranged for the Heberden Oration for 1950 to be given by Professor Hans Selye, of Montreal, at B.M.A. House, Tavistock Square, London, W.C., on Friday, June 2, at 5 p.m., and on Saturday, June 3, at 10 a.m. His subject is "The Rheumatic Diseases as Diseases of Adaptation." Members of the medical profession are invited to attend.

Cancer Congress

The Fifth International Cancer Congress will be held in Paris under the patronage of the President of the French Republic on July 15–22. It will coincide with the commemoration of the fiftieth anniversary of the discovery of radium by Pierre and Mme. Curie. The sessions will be held at the Sorbonne, and the congress will be in three main sections: (1) biology and experimental work; (2) pathological, clinical, and therapeutic aspects; and (3) social medicine. Those wishing to enrol as members of the congress must be members of a recognized society or be recommended by a society. Full information may be obtained from the secretary, 6, Avenue Marceau, Paris, 8e.

SOCIETIES AND LECTURES

Friday

BRITISH INSTITUTE OF RADIOLOGY.—At 32, Welbeck Street, London, W., April 21, 5 p.m., meeting of medical members; 6.30 p.m., "*Interesting Features of American Diagnostic Radiology*," by Dr. G. M. Ardran.

Monday

EDINBURGH UNIVERSITY.—At Physiology Lecture Theatre, University New Buildings, Teviot Place, April 24, 5 p.m., "*Primitive Magic and Present-day Belief*," by Dr. Douglas Guthrie.

INSTITUTE OF LARYNGOLOGY AND OTOLOGY, 330, Gray's Inn Road, London, W.C.—April 24, 9.30 a.m., "*Tumours of the Post-nasal Space*," by Mr. F. C. W. Capps.

MEDICAL SOCIETY OF LONDON, 11, Chandos Street, Cavendish Square, London, W.—April 24, 8.30 p.m., "*Non-malignant Affections of the Oesophagus*," discussion to be introduced by Mr. N. R. Barrett and Mr. R. H. Franklin.

Tuesday

DONCASTER MEDICAL SOCIETY.—At Messrs. Parkinsons Café, High Street, Doncaster, April 25, 7.30 p.m., meeting in conjunction with Doncaster Division; dinner, followed by address: "*Hare Lip and Cleft Palate*," by Mr. Michael C. Oldfield. Illustrated by colour film.

ROYAL EYE HOSPITAL (KING'S COLLEGE HOSPITAL GROUP), St. George's Circus, London, S.E.—April 25, 5 p.m., "*Science and Art of Refraction*," by Dr. T. H. Whittington.

Wednesday

HARVEIAN SOCIETY OF LONDON.—At 26, Portland Place, London, W., April 26, 8.15 p.m., "*The Dermatitis-Eczema Problem as a Guide to Future Trends in Medicine*," by Dr. H. R. Vickers.

INSTITUTE OF OPHTHALMOLOGY (UNIVERSITY OF LONDON), Judd Street, London, W.C.—April 26, 5.30 p.m., "*Experimental Production of Cataract*," by Dr. J. W. Waters.

INSTITUTE OF PSYCHIATRY (UNIVERSITY OF LONDON), Maudsley Hospital, Denmark Hill, London, S.E.—April 26, 4.30 p.m., lecture-demonstration for postgraduates by Dr. E. Stengel.

PHYSICAL SOCIETY: COLOUR GROUP.—At Lecture Room, Institute of Ophthalmology, Judd Street, London, W.C., April 26, 3.30 p.m., 51st Science Meeting. "*Recent Work on Chemistry in Relation to Vision*," by Professor R. A. Morton, F.R.S.

SOCIETY OF CHEMICAL INDUSTRY: FOOD GROUP.—(1) At Pavilion, Winter Garden, Devonshire Park, Eastbourne, April 26, 10 a.m., joint meeting with the Royal Sanitary Institute, "*Hygiene and Food Manufacture*," address by Mr. A. L. Bacharach, followed by papers by Mr. J. B. M. Coppock, B.Sc., Ph.D., F.R.I.C., Professor E. L. Crossley, B.Sc., F.R.I.C., and Mr. F. R. Gerrard; (2) At Chemical Society's Rooms, Burlington House, Piccadilly, London, W., April 26, 6 p.m., annual general meeting of members of Nutrition Panel; (3) At Chemical Society's Rooms, Burlington House, Piccadilly, London, W., April 26, 6.15 p.m., meeting of Nutrition Panel. "*The Nutritional Significance of Vegetarianism*," by Dr. F. Wokes.

Thursday

HONYMAN GILLESPIE LECTURES.—At Anatomy Theatre, University New Buildings, Teviot Place, Edinburgh, April 27, 5 p.m., "*Comparative Anatomy of the Heart*," by Professor R. Walmsley.

MEDICO-LEGAL SOCIETY.—At 26, Portland Place, London, W., April 27, 8.15 p.m., "*Carbon Monoxide Poisoning—Suicide, Accident, and Murder*," by Dr. F. E. Camps.

ROYAL EYE HOSPITAL (KING'S COLLEGE HOSPITAL GROUP), St. George's Circus, London, S.E.—April 27, 5 p.m., "*Affections of the Fundus*," by Professor Arnold Sorsby.

ST. GEORGE'S HOSPITAL MEDICAL SCHOOL, Hyde Park Corner, London, S.W.—April 27, 4.30 p.m., "*Neurology*," lecture-demonstration by Dr. A. Feiling.

WREXHAM AND DISTRICT CLINICAL SOCIETY.—At Wynnstay Arms Hotel, Wrexham, April 27, 7.30 p.m., "*Cardiac Surgery*," by Mr. Ronald Edwards.

Friday

INSTITUTE OF OPHTHALMOLOGY (UNIVERSITY OF LONDON), Judd Street, London, W.C.—April 28, 5.30 p.m., "*Industrial Ophthalmology*," by Mr. J. G. D. Currie.

KENT AND CANTERBURY HOSPITAL, Canterbury.—April 28, 5 p.m., clinical meeting.

MEDICAL SOCIETY FOR THE STUDY OF VENEREAL DISEASES, 11, Chandos Street, London, W.—April 28, 8 p.m., "*Cardiovascular Syphilis*," by Dr. Claude Nicol.

ROYAL EYE HOSPITAL (KING'S COLLEGE HOSPITAL GROUP), St. George's Circus, London, S.E.—April 28, 4.15 p.m., "*Pathology*," by Miss M. Savory.

Saturday

LONDON ASSOCIATION OF THE MEDICAL WOMEN'S FEDERATION.—At Bethlem Royal Hospital (Monks' Orchard), Eden Park, Beckenham, April 29, 3 p.m., meeting.

BIRTHS, MARRIAGES, AND DEATHS

BIRTHS

Cameron.—On March 30, 1950, at Selly Oak Hospital, Birmingham, to Frances Maud (née Majury), wife of Dr. H. MacDonald Cameron, a son.

Dencer.—On March 19, 1950, at the Queen Elizabeth Hospital, Birmingham, to Carmel (née Hillary), M.B., Ch.B., wife of Derrick Dencer, F.R.C.S., a son.

Hatcher.—On March 4, 1950, to Joan (née Tanner), M.B., B.S., wife of Edmund W. Hatcher, a daughter—Mary Clare.

Lewis.—On April 11, 1950, to Nancie (Faux), wife of Ivor Lewis, M.D., M.S., F.R.C.S., a son.

Middlemiss.—On April 14, 1950, to Maria, wife of Dr. J. L. Middlemiss, a son.

Orford Smith.—On April 11, 1950, at the Queen Elizabeth Hospital, Birmingham, to Mary, wife of Dr. E. S. Orford Smith, late of Norwich, a daughter.

GOLDEN WEDDING

Easterbrook—Forrester.—On April 18, 1900, at Morningside Parish Church, Edinburgh, Alexander Maitland Easterbrook, M.B., C.M., of Gorebridge, Midlothian, to Emily Kenyon Forrester, younger daughter of the late William Forrester, late of Arngibbon, Perthshire (now Stirlingshire), now of Gowanbrae, Eskbank, Midlothian.

DEATHS

Aldridge.—On April 8, 1950, at "Hurstlyn," Fourth Avenue, Frinton-on-Sea, Essex, George Aldridge, L.M.S.S.A.

Carslaw.—On April 14, 1950, at 15, Campbell Drive, Bearsden, Glasgow, James Carslaw, M.B., C.M.

Diamond.—On April 12, 1950, at 150, Whitehall Road, Gateshead, William Campbell Elliott Diamond, M.B., B.S., late Malayan Medical Service, aged 52.

Duffus.—On April 13, 1950, at 2, Lyndewode Road, Cambridge, Henry Duffus, M.B., C.M., aged 80.

Feaver.—On April 6, 1950, at Hatherley, Dyke Road, Hove, Sussex, Lewis Feaver, M.R.C.S., L.R.C.P., aged 79.

Gilmore.—On April 10, 1950, at King's College Hospital, Owen Gilmore, M.D., F.R.C.S.Ed., of 22c, Kensington Court, London, W., aged 87.

Any Questions?

Correspondents should give their names and addresses (not for publication) and include all relevant details in their questions, which should be typed. We publish here a selection of those questions and answers which seem to be of general interest.

Adopting a Child

Q.—*A husband and wife want to adopt a baby, but find themselves at the end of the long waiting-lists of the adoption organizations. They have been my patients, and there is no possibility of conception. They now live in another part of the country. Also among my patients is a young unmarried girl who will have a baby in a few months. She has gone off to another town for her confinement. There is no chance of her marriage to the baby's father, and she has decided to have the child adopted as soon after the birth as possible. I should like to arrange, if possible, the adoption between the two parties, with the co-operation of their respective doctors. What are the legal and technical formalities involved, and what steps and safeguards are advised?*

A.—The law and practice relating to child adoption have been considerably modified by the Adoption of Children Act, 1949 (a copy of which can be obtained, price 6d., from H.M. Stationery Office). Although adoption can be arranged privately, subject to the sanction of the court, it is better to enlist the co-operation of the authorities in order to avoid certain legal pitfalls. The doctor should first obtain the consent of the prospective mother to his making provision for adoption, and should then write to the children's officer of his county council (or county borough council), asking her to make the necessary arrangements. This officer will then interview the parties concerned and obtain all the necessary documents. If the prospective parents live in a different local authority area, she will get in touch with her opposite number in that area to arrange for reception of the child. The mother's final consent cannot be given before the child is at least six weeks old, and it is better that the child should remain with the mother, if possible, during this period, both for his own greater comfort and hers, and because she may (as often happens) change her mind and decide to retain the child.

The adoption order will not be made until the child has been in the custody of the prospective adopting parents for at least three months; and the county council in whose area the adopters reside must have received three months' notice of their intention to adopt. The children's officer concerned must be satisfied that the adoption is in the best interests of the child before the order can be made. The adopting parents must each be at least 21 and preferably not over 40 years of age, and one of them must be at least 25 and at least 21 years older than the child. There are other regulations relating to consanguinity of the parties, and to the rights of property and inheritance of titles, etc. Finally, it is illegal to accept any payment from the parties or their agents in respect of arranging an adoption.

Temporary Fillings

Q.—*On long voyages and in certain remote parts of the world there is no access to dentists, and I have often been asked to provide temporary fillings. What is the simplest technique for doing this? What substances should be used for the fillings, and in what proportions, and is this likely to give relief for any length of time?*

A.—The best material to use for a temporary filling is a paste made of zinc oxide mixed with eugenol or oil of cloves. Sufficient zinc oxide is mixed into the oil to make a firm putty-like paste. The inclusion of a few wisps of cotton-wool in the paste helps to bind it and stop crumbling. It is advisable to excavate the cavity gently to obtain a little undercut to retain the filling, before its insertion, and in deep painful cavities it is often helpful to put in a little of the mixed paste in a rather softer condition at the bottom and then insert firmer paste over the top. It has been shown experimentally that this mixture is not likely to cause irritation of the pulp, and it gives the best chance for preservation of the teeth where facilities for doing proper fillings and so on are not available. If the pain subsides after insertion of the filling it is probable that in most cases, unless an infective pulpitis has supervened, the patient will continue to be free from pain while the filling lasts. In areas that do not take biting strain such fillings may last two or three years. Where, however, they are bitten on they may last only a few months or less.

Fenestration Operation for Otosclerosis

Q.—*What exactly is the operation of fenestration for otosclerosis, what post-operative care is needed, and how long is the patient likely to be away from his work? My patient is a vicar and is having the operation this month. What attention will he be likely to require from me on his return home?*

A.—The fenestration operation for otosclerosis is performed in one stage. The operation is so devised that the perilymph which has been rendered immobile by the fixation of the stapes on the round window is made mobile by making another window, or fenestra, in the dome of the vestibule. This new fenestra being covered only by skin enables the perilymph to become mobile again and so enables the organ of Corti to be stimulated by waves of the endolymph. This briefly is the purport of the operation. Naturally the operation can be successful only if the organ of Corti has an adequate reserve of function. The duration of the patient's stay in hospital is usually nine days. The patient will be away from manual work for four weeks. The dressings are all done by the surgeon or a well-trained assistant, for only by this means can a good result be ensured. The patient requires no attention whatever at home, or from his general practitioner, other than the regulation of his activities with a view to the requisite rest and sleep, etc. Dressings continue for from four to six weeks at intervals determined by the surgeon.

The patient has marked giddiness during the first 48 hours after the operation, gets up out of bed on the third or fourth day, and is completely ambulatory on the ninth day. He should be encouraged to do exercises and rehabilitate himself as much as possible, but all this comes under the guidance of the surgeon. In the case of the patient referred to, he should be able to return to his pulpit from four to six weeks from the date of the operation.

Mooren's Ulcer of the Cornea

Q.—*What is the correct treatment for Mooren's ulcer of the cornea? A gardener aged 60 has had a Mooren's ulcer of the left cornea for two years. It shows no signs of healing permanently, despite the efforts of a local oculist, rest in bed, cauterization, penicillin injections, and every possible attention to general health. Has streptomycin or any other antibiotic been used for this condition?*

A.—Treatment in these cases is often disappointing. Excision of the overhanging edge of the ulcer followed by the application of carbolic and trichloracetic acid, absolute alcohol, and iodine is rarely successful. While the action of a local application of radium is uncertain, a prolonged reduction in the intra-ocular tension may help. The writer has had most success with carbolization, covering the whole cornea with conjunctiva by a purse-string suture, and combining these measures with tarsorrhaphy. Streptomycin and aureomycin have not yet been given sufficient trial in these cases.

Scalp Boils in Chinese Infants

Q.—*In this part of Malaya many infants have boils on their heads. The incidence is mostly among the Chinese, the condition is seen only in infants, and the area affected is almost always the scalp. What would be a profitable line of inquiry to find out the cause, and what should be the treatment for this condition?*

A.—The frequency of boils found on the heads of young Chinese children in Malaya is due to several factors. One is

the fact that these children are so often fed on sweetened condensed milk, the high carbohydrate content of which predisposes to boils and septic skin conditions. The second factor is the custom of shaving the head in young children, particularly the area above the back of the neck and the ears. This shaving often results in some trauma to the skin, and it is through these lesions that septic foci are developed, with resulting enlargement of the glands. These later form boils and may have a serious debilitating effect. A third important factor is the parents' reluctance to bathe children when they are sick. Very often the Chinese child is not washed for weeks on end because he has had some malaise. Another contributory factor is the habit of keeping babies hanging from the roof in a folded sarong by way of a cradle, or in some other confined position which restricts movement and which also prevents any movement of air. The babies, particularly if they are ill, become hot and sweaty. This condition is also often aggravated by a rather tight and hard collar round the neck of the coat worn by the child. Sometimes these garments are hard enough to abrade the soft skin of a young baby. In areas where the work of maternity and child health centres has been started and people have accepted the advice of the health nurses with regard to food, clothing, and ventilation for the babies, and the use of scissors instead of a razor for cutting the hair, these boils are extremely rare.

Panniculitis and Osteoarthritis

Q.—*Do the tender fatty pads so often found in the lower limbs in association with osteoarthritis of the knee-joints bear any relationship to adiposis dolorosa? What is known of the cause of these pads, and what treatment is recommended? Would "D.O.C.A." tend to aggravate the condition due to increased salt and water retention? I would be glad of some references on the subject.*

A.—Very little attention has been paid to the part played by fatty tissue in pathological conditions. This matter was considered in a recent Hunterian lecture (Copeman, W. S. C., *British Medical Journal*, 1949, **2**, 191), however, which should be consulted. The author stated his view that the tender fat pads mentioned differ only in degree from those present in cases of adiposis dolorosa, and that the mechanism of pain in both conditions is similar—being due to abnormal distension of the fat-pads by intracellular oedema, which is presumably of endocrine origin. No case of treatment of these pads by means of "D.O.C.A." has been recorded, but the presumption is that sodium chloride would be retained in the body and the condition would be exacerbated. A more hopeful line of treatment would presumably be by means of androgens. Dehydration by any means is advocated. This will include such measures as weight reduction and a salt-free diet, urea after meals, fluid restriction, and mercurial diuretics. Further work on the subject of panniculitis and adiposis dolorosa is badly needed.

Television Hazards

Q.—*In your issue of March 4 I notice that according to Dr. Donald Hunter (p. 506) the potential hazards in the luminizing industry are "irradiation by alpha particles and beta and gamma rays." Beta rays are, I presume, beta particles, which are the same things as electrons. It occurs to me that many persons are sitting in the evening facing an "electron gun" when viewing a television programme. Have any ill-effects been ascribed to the discharge of beta particles from a television tube, or does the nature of the tube prevent the particles from escaping and impinging on the viewer?*

A.—The electrons of a cathode-ray tube would be stopped by the glass, but in being stopped they must generate *x* rays, which would be "soft." The dosage rate is unlikely to be significant, but is being investigated experimentally by the Radio Manufacturers' Association, primarily in relation to projection tubes which operate at a higher level of intensity. It may be noted that many thousands of radar operators looked for thousands of hours at cathode-ray tubes during the war without known ill effects from this cause.

Leucotomy in the Elderly

Q.—*Can frontal leucotomy be undertaken at any age, and does it usually mean that the patient can live at home without supervision? A man aged 78, in above average physical condition, developed a severe obsessional neurosis three months ago; there is a history of about four minor obsessional attacks previously. There has been no response to E.C.T., and the general level of the condition is such that the patient continues to need institutional care. Should prefrontal leucotomy be considered now, and, if so, what are the operative risks?*

A.—Prefrontal leucotomy can be performed safely in elderly patients. From the technical viewpoint it is not a major surgical procedure, and in good hands the operation carries a mortality of only 2 or 3%. The natural tendency to withhold this method of treatment even in cases of psychosis is based upon the alteration of the patient's personality to which it gives rise. This takes the form of a loss of depth of character, and in this change there may be made out a bleaching of emotional responses and impairment of judgment, initiative, and self-control. This alteration in personality is, however, not such as to prevent the patient living outside an institution, and the patient in question should require no more supervision than any other individual of his age. The prospect of discharge from hospital after the operation depends upon the nature of the mental disease for which it is performed. Melancholia and obsessional states are usually influenced favourably, but in schizophrenia, especially of long standing, the results from the point of view of return to life outside an institution are less good. In the case in question the operative risk is slight and certainly justified. However, since the duration of the neurosis is but three months it might be well to persevere with more conservative therapy for a further period of three months.

Weight-lifting and Cardiac Hypertrophy

Q.—*Is weight-lifting apt to lead to cardiac hypertrophy with possible ill effects in later life? A young man of 20 has been practising three times a week for a couple of hours, lifting, while lying down, 240 lb. (157 kg.); apparently he does six lifts ten times. He looks tired and pale, but clinically there appears to be no abnormality. What advice should be given him, and are any further investigations necessary?*

A.—There is no evidence that weight-lifting causes cardiac hypertrophy or other ill effects. No further investigations are necessary. If the patient complains of fatigue it might be suggested that he take up some other form of recreation on which to dissipate his excess of energy.

NOTES AND COMMENTS

Inflammable Toys.—The British Fire Services' Association is disturbed about the possible danger that may arise from the possession by children of inflammable toys—for example, made out of celluloid or out of inflammable plastic material. It is not easy to collect evidence on the risk of such toys, and we therefore appeal to any general practitioner with experience of accidents and fatalities arising from such risk to pass on the information to the secretary of the British Fire Services' Association, 86, London Road, Leicester.

Correction.—Commenting on the new Medical Bill in the *Journal* of April 1 (p. 776), we erroneously implied that the G.M.C. has no machinery for preventing frivolous charges from coming before the Discipline Committee. In fact, a standing committee exists for that purpose.

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